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Second Annual Report
**Illinois State
Bee-Keepers'
Association**



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SECOND ANNUAL REPORT

OF THE

ILLINOIS

State Bee-Keepers' Association

ORGANIZED FEBRUARY 26th, 1891, AT
SPRINGFIELD, ILLINOIS.

Compiled by JAMES A. STONE, Secretary,
BRADFORDTON, ILLINOIS.

SPRINGFIELD, ILL.:
ILLINOIS STATE REGISTER BOOK PUBLISHING HOUSE.
1894.

LETTER OF TRANSMITTAL

OFFICE OF THE SECRETARY,
BRADFORDTON, ILL., Feb'y 1, 1894. }

To his Excellency, HON. JOHN P. ALTGELD,
Governor of Illinois:

SIR: I have the honor to transmit herewith the Second Annual Report of the Illinois State Bee-Keepers' Association, which would have issued one year ago, but for the last Legislature having failed to appropriate to continue the same, when it was thought wise to delay it to the end of the next year.

There being no compensation to the Secretary outside of the Association (which about pays for the time spent in correspondence) for all the work of this report, we are not able to boast of the earliness in which it is presented.

Respectfully submitted,

JAMES A. STONE,
Secretary.

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OFFICERS

OF THE

ILLINOIS STATE BEE-KEEPERS' ASSOCIATION.

1893.

President, HON. J. M. HAMBAUGH, Spring.

VICE-PRESIDENTS.

1st—J. Q. SMITH, Lincoln

2d—MRS. L. HARRISON, Peoria

3d—PETER MILLER, Belleville

4th—GEO. POINDEXTER, Kenney

5th—C. P. DADANT, Hamilton

Secretary, JAS. A. STONE, Bradfordton

Treasurer, A. N. DRAPER, Upper Alton

1894.

President, HON. J. M. HAMBAUGH, Spring.

VICE-PRESIDENTS.

1st—C. P. DADANT, Hamilton

2d—J. Q. SMITH, Lincoln

3d—S. N. BLACK, Clayton

4th—MRS. L. HARRISON, Peoria

5th—CHAS. HERTEL, Freeburg

Secretary, JAS. A. STONE, Bradfordton

Treasurer, A. N. DRAPER, Upper Alton

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Roll of Members for 1893.

Arnold, Frank X.....	Deer Plain, Ill.
Baldrige, M. M.....	St. Charles, Ill.
Baldwin, A. Y.....	DeKalb, Ill.
Beall, C. M.....	Clayton, Ill.
Becker, Chas.....	Pleasant Plains, Ill.
Bevier, M.....	Bradford, Ill.
Black, S. N.....	Clayton, Ill.
Black, S. H.....	Sciota, Ill.
Blecka, Frank.....	Elgin, Ill.
Blunier, Peter.....	Roanoke, Ill.
Cadwallader, D. A.....	Prairie du Rocher, Ill.
Cooper, D. D.....	Sherman, Ill.
Coppin, Aaron.....	Wenona, Ill.
Dadant, Chas.....	Hamilton, Ill.
Dadant, C. P.....	Hamilton, Ill.
Dahl, Peter.....	Granville, Ill.
Davis, Mark.....	Lisle, Ill.
Dintlemann, L. F.....	Belleville, Ill.
Draper, A. N.....	Upper Alton, Ill.
England, P. J.....	Fancy Prairie, Ill.
Everett, J. D.....	Oak Park, Ill.
Fehr, A. G.....	Belleville, Ill.
Finch, W. J., Jr.....	Springfield, Ill.
Flanagan, E. T.....	Belleville, Ill.
Forncrook, J.....	Watertown, Wis.
Gallagher, J. S.....	Hartland, Ill.
Green, J. A.....	Ottawa, Ill.
Hahn, N. S.....	Henderson, Ill.
Hambaugh, Hon. J. M.....	Spring, Ill.

Hertel, Chas.....	Freeburg, Ill.
Hutchinson, W. Z.....	Flint, Mich.
Kildow, A. L.....	Sheffield, Ill.
Larrabee, J. H.....	Agr. College, Mich.
Liebrock, Jacob.....	Mascoutah, Ill.
Lyman, W. C.....	Downer's Grove, Ill.
Mandelbaum, M. H.....	Chicago, Ill.
Mann, C. V.....	Riverton, Ill.
Miller, Peter.....	Belleville, Ill.
Phelps, A.....	Springfield, Ill.
Poindexter, Geo.....	Kenny, Ill.
Poindexter, Jas.....	Bloomington, Ill.
Robbins, D. E.....	Payson, Ill.
Robbins, Geo. F.....	Mechanicsburg, Ill.
Robinson, Elias.....	Carmi, Ill.
Ruff, G.....	Burlington, Iowa.
Smith, J. Q.....	Lincoln, Ill.
Spracklen, A. W.....	Cowden, Ill.
Stone, James A.....	Bradfordton, Ill.
Stow, N. L.....	South Evanston, Ill.
Sweet, C. L.....	Glenwood, Ill.
Thompson, Geo.....	Geneva, Ill.
Vance, W. A.....	Glencoe, Ill.
Wheeler, J. C.....	Plano, Ill.
York, Geo. W., Ed. Am. Bee Journal..	Chicago, Ill.

HONORARY MEMBERS.

Frank Benton..	Agr. Department, Washington, D. C.
Rev. W. F. Clarke.....	Guelph, Ont.

Roll of Members for 1894.

On account of the North American Bee-Keepers Association meeting in Chicago last fall, the Illinois State Association decided not to have its Chicago meeting (as provided when Northwestern affiliated with it) and for that reason has not as many members this year as before.

Arnold, Frank X.....	Deer Plain, Ill.
Augustine, Henry.....	Normal, Ill.
Beall, C. M.....	Clayton, Ill.
Bevier, M.....	Bradford, Ill.
Black, S. H.....	Sciota, Ill.
Black, S. N.....	Clayton, Ill.
Blecka, Frank.....	Elgin, Ill.
Blunier, Peter.....	Roanoke, Ill.
Bryant, Ralph C.....	Princeton, Ill.
Cadwallader, D. A.....	Prairie du Rocher, Ill.
Dadant, C. P.....	Hamilton, Ill.
Dahl, Peter.....	Granville, Ill.
Draper, A. N.....	Upper Alton, Ill.
Dunlap, Henry M.....	Savoy, Ill.
Finch, W. J. Jr.....	Springfield, Ill.
Flannagan, E. T.....	Belleville, Ill.
Gallagher, J. S.....	Hartland, Ill.
Green, J. A.....	Ottawa, Ill.
Hahn, N. S.....	Henderson, Ill.
Hambaugh, Hon. J. M.....	Spring, Ill.
Hertel, Chas.....	Freeburg, Ill.
Highbarger, L.....	Leaf River, Ill.

Little, Wm.....	Marissa, Ill.
McCluer, G. W.....	Champaign, Ill.
Miller, Dr. C. C.....	Marengo, Ill.
Phelps, A.....	Springfield, Ill.
Poindexter, Geo.....	Kenny, Ill.
Poindexter, James.....	Bloomington, Ill.
Robbins, Geo. F.....	Mechanicsburg, Ill.
Snell, F. A.....	Milledgeville, Ill.
Smith, J. Q.....	Lincoln, Ill.
Stone, J. A.....	Bradfordton, Ill.
Vandenburg, P. E.....	Jerseyville, Ill.
Whittlesey, Edmund.....	Pecatonica, Ill.

HONORARY MEMBERS.

Rev. A. H. Bates.....	Springfield, Ill.
Col. Chas. F. Mills.....	Springfield, Ill.
T. G. Newman.....	Chicago, Ill.
Geo. W. York.....	Chicago, Ill.
A. I. Root.....	Medina, Ohio.
W. Z. Hutchinson.....	Flint, Mich.

For names of members who paid their fees after February 1st, see appendix.

CONSTITUTION AND BY-LAWS
OF THE
Illinois State Bee-Keepers' Association.

CONSTITUTION.

ADOPTED FEB. 26, 1891.

ARTICLE I—NAME.

This organization shall be known as the Illinois State Bee-Keepers' Association, and its principal place of business shall be at Springfield, Ill.

ARTICLE II—OBJECT.

Its object shall be to promote the general interests of the pursuit of Bee Culture.

ARTICLE III—MEMBERSHIP.

SEC. 1. Any person interested in Apiculture may become a member upon the payment to the Secretary of an annual fee of one dollar (\$1.00.)

SEC. 2. Any persons may become honorary members by receiving a majority vote at any regular meeting.

ARTICLE IV—OFFICERS.

SEC. 1. The officers of this Association shall be: President, five Vice Presidents, Secretary and Treasurer. Their terms of office shall be for one year, or until their successors are elected and qualified.

SEC. 2. The President, Secretary and Treasurer shall constitute the Executive Committee.

SEC. 3. Vacancies in office—by death, resignation or otherwise—shall be filled by the Executive Committee until the next annual meeting.

ARTICLE V—AMENDMENTS.

This Constitution may be amended at any annual meeting by a two-thirds vote of all members present—thirty days notice having been given to each member of the Association

BY-LAWS.

ADOPTED DECEMBER 16, 1891.

ARTICLE I.

The officers of this Association shall be elected by ballot and by a majority vote.

ARTICLE II.

It shall be the duty of the President to call and preserve order at all meetings of this Association; to call for all reports of officers and committees; to put to vote all motions regularly seconded; to count the votes at all elections and declare the results; to decide upon all questions of order; and to deliver an address at each annual meeting.

ARTICLE III.

The Vice Presidents shall be numbered respectively, First, Second, Third, Fourth and Fifth, and it shall be the duty of one of them in his respective order to preside in the absence of the President.

ARTICLE IV.

SEC. 1. It shall be the duty of the Secretary to report all proceedings of the Association, and to record the same, when approved, in the Secretary's book; to conduct all correspondence of the Association, and to file and preserve all papers belonging to the same; to receive the annual dues and pay them over to the Treasurer, taking his receipt for the same; to take and record the name and address of every member of the Association; to cause the Constitution and By-Laws to be printed in appropriate form, and in such quantities as may be directed by the Executive Committee from time to time, and see that each member is provided with a copy thereof; to make out and publish annually, as far as practicable, a statistical table showing the number of colonies owned in the spring and fall, and the amount of honey and wax produced by each member, together with such other information as may be deemed important, or be directed by the Executive Committee; and to give notice of all meetings of the Association in the leading papers of the State and in the Bee Journals at least four weeks prior to the time of such meeting.

SEC. 2. The Secretary shall be allowed a reasonable compensation for his services, and to appoint an assistant Secretary if deemed necessary.

ARTICLE V.

It shall be the duty of the Treasurer to take charge of all funds of the Association, and to pay them out upon an order signed by the President and countersigned by the Secretary, taking a receipt for the same; and to render a report of all receipts and expenditures at each annual meeting.

ARTICLE VI.

It shall be the duty of the Executive Committee to select subjects for discussion and appoint members to deliver addresses or read essays, and to transact all interim business.

ARTICLE VII.

The meetings of the Association shall be, as far as practicable, governed by the following order of business:

Call to order.
Reading minutes of last meeting.
President's address.
Secretary's report.
Treasurer's report.
Reports of committees.
Unfinished business.
Reception of members and collection.
Miscellaneous business.
Election and installation of officers.
Discussion.
Adjournment.

ARTICLE VIII.

These By-Laws may be amended by a two-thirds vote of all the members present at any annual meeting.

C. E. YOCOM,
AARON COPPIN,
GEO. F. ROBBINS.

BEE-KEEPERS' ASSOCIATION.

An Act Making an Appropriation in Aid of the Illinois State Bee-Keepers' Association.

WHEREAS, The large and growing industry of bee-keeping in the State of Illinois is worthy of proper encouragement in the General Assembly; and

WHEREAS, The Illinois State Bee-Keepers' Association, an organization composed of the leading Apiarists of the State, is engaged in promoting this industry and desires an appropriation to assist in this work; therefore,

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That there be and hereby is appropriated for the use of the Illinois State Bee-Keepers' Association, the sum of five hundred dollars (\$500) per annum: Provided, however, that no portion thereof shall be paid for, or on account of any salary, or emoluments of any officer of said Association, and that said sum be expended by said Illinois Bee-Keepers' Association in the publication of such reports and information pertaining to this industry as will tend to promote the growth and develop the apiarian interests for the years 1891 and 1892.

SECTION 2. That, on the order of the President, countersigned by the Secretary of the Illinois Bee-Keepers Association, and approved by the Governor, the State Auditor shall draw his warrant annually in favor of the Treasurer of the Illinois Bee-Keepers' Association for the sums herein appropriated.

Approved June 16, 1891.

WORLD'S COLUMBIAN EXPOSITION.

An Act to amend an act entitled "An act to provide for the participation of the State of Illinois in the World's Columbian Exposition, authorized by an act of Congress of the United States, to be held in the City of Chicago during the year 1893, in commemoration of the discovery of America in the year 1492, and for an appropriation to pay the cost and expense of the same," approved June 17, 1891.

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That an act entitled "An act to provide for the participation of the State of Illinois in the World's Columbian Exposition, authorized by act of Congress of the United States, to be held in the city of Chicago during the year 1893, in commemoration of the discovery of America in the year 1492, and for an appropriation to pay the cost and expense of the same," approved June 17, 1891, be and the same is hereby amended by adding sections 11, 12, 13, 14, 15, 16, 17 and 18 of said act, so as to read as follows:

SECTION 11. There is hereby constituted a board, to be made up of the members of the executive committee of the Illinois State Horticultural Society, who shall have charge of and direct a display of the fruit products of Illinois in the National Horticultural Building during the time of said exposition.

SECTION 12. From the amount appropriated in Section 7 of this act not already expended, there is hereby set aside the sum of twenty thousand dollars (\$20,000) for the purpose of making a display of the fruit products of Illinois, which sum shall be expended under the direction and control of the

board provided for in Section 11. Said sum shall be paid by the State Treasurer upon warrants drawn by the Auditor of Public Accounts, which warrants shall be drawn only upon vouchers accompanied with itemized bills, signed by the President of said executive board, countersigned by the Secretary and approved by the Governor.

SECTION 13. There is hereby constituted a board to be made up of the members of the executive committee of the Illinois State Dairymen's Association, who shall have charge of and direct a display of the dairy products of Illinois in the national building of said exposition.

SECTION 14. From the amount appropriated in Section 7 of this act not already expended there is hereby set aside the sum of fifteen thousand dollars (\$15,000) for the purpose of making a display of the dairy products of Illinois, which sum shall be expended under the direction and control of the board provided for in Section 13. Said sum shall be paid by the State Treasurer upon warrants drawn by the Auditor of Public Accounts, which shall be drawn only upon vouchers accompanied by itemized bills, signed by the President of said executive board and countersigned by the Secretary and approved by the Governor.

SECTION 15. There is hereby constituted a board to be made up of members of the executive committee of the Illinois Brick and Tilemakers' Association, who shall have charge of and direct a display of manufactured clay products of the State of Illinois, in the national building during the time of said exposition.

SECTION 16. From the amount appropriated in Section 7 of this act, not already expended, there is hereby set aside the sum of eight thousand dollars (\$8,000) for the purpose of making a display of the manufactured clay products of the State of Illinois, which sum shall be expended under the direction and control of the board provided for in Section 15. Said sum shall be paid by the State Treasurer upon warrants drawn by the Auditor of Public Accounts, which warrant

shall be drawn only upon vouchers accompanied with itemized bills, signed by the President of said executive board, countersigned by the Secretary and approved by the Governor.

SECTION 17. There is hereby constituted a board to be made up of the members of the executive committee of the Illinois Bee-Keepers' Association, who shall have charge of and direct a display of the apiary products of the State of Illinois in the national buildings of said exposition.

SECTION 18. From the amount appropriated in Section 7 of this act, not already expended, there is hereby set aside the sum of three thousand five hundred dollars (\$3,500) for the purpose of making a display of the apiary products of the State of Illinois, which sum shall be expended under the direction and control of the board provided for in Section 17. Said sum shall be paid by the State Treasurer upon warrants drawn by the Auditor of Public Accounts, which warrants shall be drawn only upon vouchers accompanied with itemized bills, signed by the President of said executive board, countersigned by the Secretary and approved by the Governor.

SECTION 2. That Section 2 of the said act to which this act is an amendment, be and the same is hereby amended so as to read as follows:

SECTION 2. The said board of commissioners is hereby empowered to obtain and cause to be properly installed in said exhibition building or buildings a collective departmental exhibit for the State of Illinois which shall illustrate the natural resources of this State, together with the methods employed and the results accomplished by the State in its municipal capacity through its several departments, boards, commissions, bureaus and other agencies, in the work of promoting the moral, educational and material welfare of its inhabitants, so far as such methods and results are susceptible of exhibition in the manner proposed. Such collective exhibits to include and to be chiefly composed as follows:

First. (a). A model common school room of high grade, fully equipped and furnished under the direction of the State Superintendent of Public Instruction.

(b). An illustration of the methods and results of educational work as pursued in the State Normal Universities, the public, technical and art schools and the high schools of the State.

(c). An exhibit by the University of Illinois of the equipment, methods of instruction and achievements of that institutions in its several departments.

(d). An exhibit of the educational and industrial work as conducted in the State Charitable Institutions.

(e). An exhibit illustrating the entire system of the inspection of the several varieties of grain, as established by the State's Railroad and Warehouse Commissioners and practiced by the State Grain Inspectors' department.

(f). Five per cent. of the amount appropriated by this act shall be devoted to the encouragement of an exhibit of live stock owned in the State of Illinois.

Twenty-five thousand dollars (\$25,000) of the amount appropriated by this act shall be devoted to defray the expenses of the attendance and exhibit of the Illinois National Guard at the World's Columbian Exposition.

Ten thousand nine hundred and nine dollars and ninety cents (\$10,909.90) of the said sum of twenty-five thousand dollars (\$25,000) shall be applied to reimburse the corporation, the World's Columbian Exposition, for money advanced by said corporation to defray the expenses incident to the attendance of the Illinois National Guard at the dedicatory ceremony of the World's Columbian Exposition, held in Chicago in October, 1892. Said sum of ten thousand nine hundred and nine dollars and ninety cents to be paid to said World's Columbian Exposition upon the voucher or vouchers to be approved by the Adjutant General of the State of Illinois.

Second. Collection correctly classified and labeled illustrating the natural history and archæology of this State, including its stratagraphical and economic geology, its soils sub-soils, useful clays and ores and other products of mines and quarries, its botany and zoology, with the products of forests, lakes and rivers; also an exhibit of the State Fish Commission, of native and cultivated live fish with hatchery and appliances and equipments for transportation, models of fishways in use; also a full and complete collection of all the cultivated products in the several branches of agriculture, farm culture, horticulture and floriculture in illustration of the widely different conditions of soil and climate under which rural husbandry is practiced in the various sections of this State.

Third. Architectural drawings with elevations of every public building erected and now used or maintained in whole or in part by the State, with maps showing the location of each and accompanied by historical and explanatory notes and tables; also maps, charts, diagrams and tables for the State, and, so far as practicable, for each county, showing its geology, distribution of useful minerals, its topography, with its lakes, rivers, canal and railways, its climatic conditions, its industrial growth and increase in population by decades from the date of organization to the year 1890, together with such other physical features as possess a scientific interest or would be taken into account in estimating the ability of our territory to maintain a dense population.

SECTION 3. Whereas, an emergency exists, therefore this act shall take effect from and after its passage.

Approved May 4, 1893.

APPROPRIATION BILL.

The following appropriation bill, for a continuance of \$500 to publish report, was offered in the last Legislature, in the Senate by Senator John Humphrey of Cook, but defeated in the Appropriation Committee. Was offered in the House by Hon. Mitchell Dazey of Adams. Passed the House, and on going to the Senate it was there defeated on second reading by the enacting clause being stricken out. See record of vote in report of Legislative Committee:

A BILL

For an act making an appropriation in aid of the Illinois State Bee-Keepers' Association.

WHEREAS, The large and growing industry of bee-keeping in the State of Illinois is worthy of proper encouragement in the General Assembly; and

WHEREAS, The Illinois State Bee-Keepers' Association, an organization composed of the leading apiarists of the State, is engaged in promoting this industry and desires an appropriation to assist in this work; therefore

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That there be and is hereby appropriated for the use of the Illinois State Bee-Keepers' Association, the sum of five hundred dollars (\$500) per annum: *Provided, however,* that no portion thereof shall be paid for or on account of any salary or emoluments of any officer of said association, and that said sum be expended by said Illinois Bee-Keepers' Association

in the publication of such reports and information pertaining to this industry as will tend to promote the growth and develop the apiarian interest for the years 1893 and 1894.

SECTION 2. That, on the order of the President, countersigned by the Secretary of the Illinois Bee-Keepers' Association, and approved by the Governor, the State Auditor shall draw his warrant annually in favor of the Treasurer of the Illinois Bee-Keepers' Association for the sum herein appropriated.

TO PREVENT THE ADULTERATION OF HONEY.

The following bill was introduced in the Senate of the last (38th) Assembly, by Senator Benj. F. Caldwell, of Sangamon county, and passed the Senate at an early date. Was introduced in the House by Dr. Whitley, of Sangamon county. Referred to Committee on Sanitary Affairs, where it died for want of some one to push it. See report of Legislative Committee.

A BILL

For an act to prevent the adulteration of honey.

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That it shall be unlawful for any person or persons to adulterate honey by mixing with it any sweets of whatsoever kind, not gathered from flowers and blooms, or to mix together any such sweets, whether with or without honey, or cause it to be done by any agency whatsoever, and to offer for sale, or sell without labeling it with the true name of its component parts, with the proportion of each and with the name and location of the manufacturer.

SECTION 2. Any person or persons convicted of a violation of any of the provisions of Section 1 of this act, shall be deemed by the court guilty of a misdemeanor, and shall be fined in any sum, not less than one hundred dollars (\$100) and not more than five hundred dollars (\$500), one half of said fine to go to the informer and the other half to the school fund.

TO PROTECT BEES FROM POISON.

The following bill was introduced in the House by Mr. James A. Smith, of Mason, March 1, 1893. It was read by title, March 1, 1893, ordered printed, and referred to Committee on Horticulture, where the bill died for want of attention.

A BILL

For an act to protect bees from poison through spraying or otherwise treating of fruit or other trees, shrubs, vines or plants with London purple, Paris green, white arsenic or other virulent poison, while the aforesaid trees, shrubs, vines or plants are in bloom.

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That it shall be unlawful for any person to spray any fruit-bearing trees, shrubs, vines or plants with Paris green, London purple, white arsenic or other virulent poisons, while such trees, vines, shrubs or plants are in bloom, and so may be visited by honey bees in quest of nectar or pollen, and that any person who shall spray such trees, vines, shrubs or plants with London purple, Paris green, white arsenic or other virulent poisons upon same while in blossom, shall be deemed guilty of a misdemeanor and for the first offense shall be punished by fine in any sum not less than five dollars, and for the second offense shall be punished by fine in any sum not less than twenty-five, and in default of payment of the same, by imprisonment in the county jail not more than ninety days.

SECTION 2. All fines and penalties specified in this act may be recovered by information, complaint or indictment, or other appropriate remedy, in court of competent jurisdiction, and when recovered shall be paid into the country treasury of the county in which the offense was committed.

REPORT
OF THE
Illinois State Bee-Keepers' Association.

The Illinois State Bee-Keepers' Association held its third semi-annual meeting on October 18th and 19th, 1892, at the Commercial Hotel in Chicago.

The convention was called to order at 11 a. m., with President J. M. Hambaugh in the chair.

The following members paid their dues:

W. Z. Hutchinson, Flint, Mich.
James A. Green, Dayton, Ill.
J. H. Larrabee, Agricultural College, Mich.
George W. York, Chicago, Ill.
W. A. Vance, Glencoe, Ill.
G. Ruff, Burlington, Iowa.
W. C. Lyman, Downer's Grove, Ill.
A. Y. Baldwin, DeKalb, Ill.
A. L. Kildow, Sheffield, Ill.
J. C. Wheeler, Plano, Ill.
Geo. Thompson, Geneva, Ill.
N. L. Stow, South Evanston, Ill.
Frank Benton, Washington, D. C.
M. H. Mandelbaum, Chicago, Ill.
M. M. Baldrige, St. Charles, Ill.
Frank Blecka, Elgin, Ill.
C. M. Beall, Clayton, Ill.
Mark Davis, Lisle, Ill.
C. L. Sweet, Glenwood, Ill.

HONORARY MEMBERS.

Wm. F. Clarke, and afterwards Frank Benton, were made honorary members.

Thomas G. Newman, the first honorary member of the association, was present.

The light crop of honey, and the failure to get the advantage of the reduced rates, made the attendance smaller than usual. It was supposed there would be reduced rates during the whole "Dedication week," and by holding the convention early in the week, it would allow the members more time for sight-seeing, but the reduced rates did not go into effect until Wednesday, the last day of the convention.

Apiarian Exhibits at the World's Fair.

It might be safely said that one-half the time of the whole convention was used in discussing the prospects of having an Illinois show of bees and honey at the coming Columbian Exposition. President Hambaugh recited at some length the trials and troubles he had borne in the way of correspondence with the "powers that be," in attempting to learn something definite in regard to whether any of the money appropriated by the State for the purpose of making a showing of agricultural products, was to be given to the bee-keeping interests. Only one-half of one per cent. had been asked for, yet even that would not be granted—at least no definite promise would be given.

Mr. Thomas G. Newman had met with the members of the Agricultural Board, and with Mr. Reynolds, and he (Newman) believed that nothing would be done. These men were all full of quibbles. Most of the objections were upon technical grounds. For example, they said that a display of honey would not be *educational*. Another reason was that they considered honey a *manufactured* article. This is a disputed point. Some do say that bees *make* honey. Professor Cook says it is "digested nectar." Of course, he is a Professor, and I am not, but I cannot agree with him.

Honey is certainly an agricultural product in contradistinction to the manufactured articles. Mr. Newman doubted if the Board of Agriculture would allow any money to be used in making an apiarian exhibition.

Mrs. Harrison contended that an apiarian exhibition would be educational. Some people think extracted honey is some sort of an "extract." An exhibition of an extractor, and the manner in which it is used, would *educate* people.

Mr. Newman said that Mr. W. I. Buchanan, Chief of the Department of Agriculture in Columbian Exposition, is a nice man, but, of course, is not an expert bee-keeper. He wrote to about twenty persons prominent in apiculture, asking for their views as to how an exhibit ought to be made. He thus secured their ideas, and he then proceeded to approve of some and reject others; but he did not always hold the same views. Each time that he was called upon he had completely upset former plans. Bee-keepers had asked for a superintendent, and recommended Dr. A. B. Mason for the position. The request had been ignored. If they ignored us in the past, they will in the future.

Secretary J. A. Stone—If things go on as they have, and they find that those big glass cases remain empty, they may run after us. By the way, a committee from the State Board of Agriculture has been appointed to meet us at this convention, and learn what is wanted, and I would suggest the propriety of appointing a committee to confer with the committee when it comes.

J. H. Larrabee—We have been making propositions to them, and I suggest that we let the proposals come from them.

Thomas G. Newman—I am not in favor of a committee to confer with this committee that is to come here, but I do favor a committee to meet and introduce the visiting committee.

Frank Benton—I do not agree with the idea that honey must be classed as a manufactured article. If honey is used

in making wines, cakes, etc., it might then be classed as manufactured. Bee-keepers ought to urge that they be recognized the same as is the case with dairymen and others.

After some further discussion, a committee consisting of Thomas G. Newman, James A. Green, J. H. Larrabee and Frank Benton was appointed to receive the committee from the State Board of Agriculture. The Secretary was instructed to inform the committee that the bee-keepers were in session, and ready to meet them, and the convention adjourned to meet at 2 p. m.

FIRST DAY—AFTERNOON SESSION.

The convention was called to order at 2 p. m., with President Hambaugh in the chair.

What the Government Is Doing, and Ought to Do, for Apiculture.

Thomas G. Newman spoke of the great importance of this subject, and said there could be no more effectual way to bring it before the convention for discussion than to read the article by Professor Cook, entitled, "Importance of Experiments in Apiculture," and published on page 498 of the *American Bee Journal*, for October 13, 1892. He then read the article, as follows:

Importance of Experiments in Apiculture.

It may be thought a matter of *doubt by some—even of our wise and thoughtful men—whether it pays to experiment, and whether our several States and Nation are warranted in expending money, time and energy in experimenting and in passing laws endowing departments and institutions for the sole purpose of making investigations. The fact that all the more advanced Nations are doing this more and more, and

the further fact that one single discovery often brings immense returns, will go far to set all such doubts at rest in the minds of the reading public.

Whether our States are wise in voting money for such purposes, and whether the Hatch Bill, appropriating such a munificent fund (which establishes a station in each State and Territory, and equips it so that if well manned, it can do much and excellent work) was timely and worthy, it is not my purpose now to discuss. We have money appropriated in several States to further experimentation, and aid investigation.

We have the Hatch Act, which appropriates \$15,000 annually to each State and Territory, which fund is to be used exclusively to further research in all directions that will foster and encourage manual-labor pursuits. Besides these, we have large annual appropriations for the Department of Agriculture, which are given with the express purpose of developing information which shall aid agriculture in all its varied departments. Thus the amount annually appropriated, for the sole purpose of research in the line of agricultural development and progress, is upwards of \$750,000.

We see that the civilized world believes that such work is valuable and desirable. We see that our country is taking the lead in this new role of endowed research, especially to unearth new and valuable truth in the aid of the industrial pursuits.

That so much of thought, study and real scientific ability can be devoted to this work of investigation, without real, substantial gain, is certainly not true. Mistakes will be made; incapable men will doubtless be employed, and, in some cases, hasty generalization will result in erroneous statements and consequent loss and injury; but it goes without saying that, for the most part, very able men will be and are secured to do this work, and exceedingly valuable discoveries are being made. Thus we are warranted richly in the assertion that many new and most valuable facts are now being discovered, and are to be more and more brought to light by this hard-working, untiring body of investigators.

THE GREAT NEEDS OF BEE-CULTURE.

But how is it with bee-keeping? How much of this thought and energy are being used to benefit this art? When we consider the large number of apiarists, the valuable product which they create, and the tremendous supplementary good which they do, in stocking the country with insects that are pre-eminent in the most important work of cross-fertilizing the flowers of our most valued fruits and vegetables, it needs no argument to show that of all the host of manual-laborers, none are more worthily employed, or more worthy of just such aid as it is the province of these experiment stations to give. Uncertain seasons; new and subtle diseases; unfair discriminations by our postal authorities, which, though, unintended and thoughtless, are just as hurtful; and the discouraging competition of cheap, insipid and often unwholesome adulterations, make it all the more important that the worthy class of honey-producers have attention, and that research remove these several obstacles that essay to check the progress of our eager, hard-working bee-keepers.

Notwithstanding the magnitude of the business, its direct and indirect importance, and the crying need of patient and thorough watchfulness or investigation in all the lines mentioned above, yet the Agricultural Department has withdrawn all aid, and, so far as the records show, no States except Michigan, Colorado, Rhode Island, and possibly New York and Iowa, are doing one thing to aid in this important direction. Even the States that have acknowledged, practically, a duty in this direction, nearly all have dealt out favors (?) most reluctantly, and, I may say, grudgingly.

It seems to me, as one who has kept close watch of this whole matter for years, that the bee-keepers have been neglected, and are entirely warranted in making a most vehement protest. I have seen enough to make me think that any one may secure his rights in this country, if he finds out just what they are, and then insists upon a recognition of them by the powers that be.

The dairymen saw that the sale of oleomargarine as butter was injuring their business. They demanded of the Government a law making the sale of manipulated (or doctored) lard and tallow as butter, a serious misdemeanor; and they secured their end and aim.

Last year we almost secured Congressional legislation that would stop the dealing in "futures"—a form of gambling hardly less infamous than the New Orleans lottery—and a general law against adulteration. Both these laws would be righteous, and will soon honor our national statutes and bless our people.

Thus we see that if we know our rights, and are energetic and determined, we can secure them.

There is no question but that every State—like Illinois, Iowa, Colorado, California, etc.—where the bee-interest is important, should take measures to have their business recognized in the experiment station. Bee-keepers in Illinois are suffering from an unknown bee-disease, which is without doubt a microbe disease. Prof. T. J. Burrill, of the Illinois University, is one of our best students of bacteriology. I doubt if he knows of this malady at all; while I fear that his name will be new to most of the bee-keepers who read this article.

Now, why may not the Illinois experiment station very wisely pay a small sum, say from three to five hundred dollars, to some first-class bee-keeper—Dr. C. C. Miller or J. A. Green would fill the bill—to keep a sharp lookout, that advantage may be taken of the wisdom in the university and station, and the interests of bee-keepers subserved all along the line?

Does any one doubt that such a person, armed with authority and paid for work, watchfulness and studious interest, would fail to give a manifold return for value received? And certainly no bee-keeper will doubt but that of \$15,000 annually paid by the United States Government to each State, for purpose of research, a claim of \$300, or even \$500, would not be greedy on the part of the bee-keepers.

Why should not the matter come up before the meeting of the Illinois Bee-Keepers' Association in Chicago, on Oct. 18th? Why should not vigorous, ringing resolutions be passed, asking for just such recognition? Why should this not be seconded by a live, wide-awake committee, to press the matter? And why should not every bee-keeper in Illinois send a personal letter to the director of the station, urging that the request be granted? Such energetic action, calling for simple right and justice, could but have weighty influence, and most probably would bring success.

And why should not such action be taken at the State conventions of every other State, where bee-keeping is an important industry? This is only pushing for what is just and right. Shall there not be a waking up to earnest action all along the line?

Again, of the large appropriations, reaching away up to thousands and thousands of dollars, for research, by the Department of Agriculture, why should bee-keepers be ostracised, even though there is a cut of \$10,000 in this year's appropriation? Why not reduce the work a little in other lines, rather than cease all work in apicultural research?

I believe that the Government could in no way have spent \$1,000 more advantageously than to have kept Mr. Larrabee in the harness. To stop this valuable line of work is surely a mistake, and I believe, a real injustice. I believe, even yet, the wrong may be righted. Let the North American Convention, and bee-keepers all over the country, act as I have suggested for Illinois, and success is assured.

That Secretary Rusk and Assistant Secretary Willits are in full sympathy with all industrial pursuits, and extend a hearty interest to bee-keepers, there is not a shadow of doubt; that Prof. Riley, who once recommended fruit-growers to plant milk-weeds to destroy bees, is very enthusiastic may not be true, but he could not resist such overwhelming petitions, even though he desired to do so.

Let all move in solid phalanx upon the *head* of the Department, and we shall gain our desires and our rights. I

believe there is hardly any action that bee-keepers can take that is as emphatic with promise of generous success and valuable aid.

The Editor of the *American Bee Journal* comments as follows:

Apicultural experiments is a subject which Prof. Cook writes about very vigorously, as above. He knows exactly what he is talking about, and bee-keepers, as well as others who read that article, will also have a better comprehension of the great importance and urgent necessity of apicultural experimentation.

Of course this work should be undertaken by the Government, and not be left to generally incompetent and often financially unable individual efforts. The various State apicultural experiment stations and colleges are the places where such work should be performed. In these institutions are to be found ample facilities and cultivated and devoted intelligence to carry on different lines of experimentation that can but result in great blessing to the bee-keeper, and in many instances would be of incalculable benefit to the country at large.

The matter of expense is not deserving of consideration, when compared with the importance of the work proposed, and the inevitable beneficent influence upon our land and nation.

We also urge upon the various more prominent bee-conventions, to be held in the near future, the wisdom of Prof. Cook's suggestion, that they pass "vigorous resolutions," and appoint "wide-awake committees" to bring this matter of the great need of apicultural experiments before the proper authorities, both State and National, and "*push for what is just and right.*" Only by so doing is there at all any promise of either immediate or later attainment of the desired righteous object.

Any suggestions that would likely aid those who may be called upon to work for the just recognition of the rights of

bee-keeper, in legislatures or elsewhere, will doubtless be appreciated. Let us have our best ideas on this, as well as other subjects which touch the apiarian heart and life.

S. N. Black—Private individuals cannot so successfully conduct experiments as can some one appointed and paid by the Government for doing so. The private purse is not long enough.

Frank Benton—All Government work in the apicultural line is done under the head of entomology. Professor Cook is wrong in saying that *all* governmental aid has been withdrawn, as I am still retained. He could not expect the entomological department to drop some of the regular work to experiment in apiculture. The cut in the appropriations has compelled this suspension in experimental work in bee-keeping. It is a pity that Professor Cook did not sign his name two paragraphs higher up in his article, and thus omit the last two paragraphs. The unkind allusion to Dr. Riley is uncalled for, as he is certainly in sympathy with the movement that has apicultural experiments for its end. It was he who instituted the experimental work at Lansing, Mich. In the cut that was made in the appropriations, he was not consulted.

James A. Green wrote to Professor Riley, and the reply showed that it was impossible for him to do more at present than he was doing.

J. H. Larrabee—Dr. Riley has assured me that he is in sympathy with bee-keepers, and in favor of experiments. I believe that more can be expected now from the State experimental stations than from the general government.

Frank Benton—Of course, nothing can be done at present by Dr. Riley.

H. D. Cutting—Don't you believe that by urging the making of experiments by the general government, or the establishing of a Division of Apiculture, that it will tend to centralize work, and take it away from the State experimental stations?

Frank Benton—Not at all. If you want work done at the State experimental stations, you must apply to the directors of the stations. If you want something of the general government, then apply to Dr. Riley.

Thomas G. Newman—I think that too much stress should not be laid upon the manner in which Professor Cook referred to Dr. Riley. Professors, lawyers, doctors, etc., get off these “squibs” on one another, and they must not be taken too seriously; at least this part of the subject is not for us to waste time over. What we need is to appoint a committee to look after this matter at our State experimental station, and I offer the following:

Resolved, That a committee of three be appointed to submit resolutions on the subject of our obtaining recognition from the Director of the Illinois State Experiment Station, and ask for a share of the appropriation of the \$15,000 from the general government for experimental purposes.

The resolution was carried, and the following committee was appointed: Thomas G. Newman, Mrs. L. Harrison and George Poindexter.

Affiliation With the North American.

Upon motion of Thomas G. Newman, it was decided that the Illinois State Bee-Keepers' Association would affiliate with the North American Bee-Keepers' Association.

Upon motion of Mr. Newman, a committee consisting of W. Z. Hutchinson, J. A. Stone and James A. Green, was appointed to look up the matter of the smaller bee societies of the State affiliating with the State society.

The convention then adjourned to meet in the evening, but on coming together there were so few present, many having gone to visit or to see the sights of the city, and others desirous of so doing, that the convention at once adjourned to meet the next morning at 9 a. m.

SECOND DAY—MORNING SESSION.

The convention was called to order at 9 a. m. President Hambaugh called upon Mr. James A. Green to open the meeting with prayer.

Mr. George W. York, the new editor of the *American Bee Journal*, then delivered the following

Address of Welcome.

Mr. President and Members of Illinois State Bee-Keepers' Association:

To do full justice in welcoming such an important organization as yours to such a marvellous city as ours, I realize it is indeed no small task. Hence, it is with a feeling akin to fear when I consider my own incompetency to do both yourselves and the city justice, and so I almost tremblingly undertake the performance of the duty assigned me.

My position to-day in the field of apiarian literature has made me somewhat familiar with just the kind of nobility I am called upon to welcome to this World's Fair city, and, in fact, it seems to me like receiving into the City, in which next year is to be held the greatest fair known to the world, the *world's fairest and sweetest people*. Such, indeed, might be the case, did I not bear in mind my duty to others of our broad land, who are alike engaged in the same ennobling and useful pursuit, and who would justly claim an equal right to the appropriate appellation—"the world's fairest and sweetest people."

In welcoming you, my friends, within the borders of our city, I am much impressed with the favorable reputation of your organization; for no less a personage than our esteemed mutual friend and co-laborer, the editor of the magnificent *Gleanings in Bee-Culture*, recently said this of you:

"Next to the North American, the Illinois State Bee-Keepers' Association is the most important, probably, of any bee-keepers' association in the United States. Since it receives annually an appropriation of \$500 from the State government, it is in a position to do effective and important work for the bee-keepers of Illinois."

That, I consider, is a great compliment, indeed, and to say that you are entirely worthy of such a high estimate, I feel is nothing more than the actual truth.

Knowing, as I do, something of the greatness and reputation of the city in which you now are, and having myself somewhat of a long range, yet blessed acquaintance with many of those to whom I am speaking, and who I am to receive, let me say that it is with the purest pleasure that I extend to the members of the Illinois State Bee-Keepers' Association a most cordial welcome to all that is grand, and glorious and sublime, in this, our Western Metropolis.

When I consider the magnitude and great usefulness of the industry which your membership represents, with its thousands upon thousands who are earnestly devoted to making our land more fruitful and its inhabitants more sweet; when I remember the antiquity of your calling, for, indeed, history tells us that away back in the centuries there was "a land flowing with milk and *honey*;" when I think upon the future that lies just before you, which is big with promise of untold and undreamed of blessings—when I consider, remember and think upon these things, I am led to appreciate the true nobility of the life and character of those whom it is my delight and honor to welcome to our city to-day.

That your deliberations may be such as shall bring to all your minds and hearts a better comprehension of your duties and responsibilities; that your coming together may result in the furtherance of all those things that shall eventually contribute to your general as well as individual welfare and advancement; and that the highest enjoyments that can possibly come from the best health and sweetness of disposi-

tion, may *all* be yours, throughout the present and eternal years, is the sincere wish of him, who again, in the name of the people of Chicago, bids a most hearty welcome.

GEORGE W. YORK.

After the address of welcome, President Hambaugh asked for criticisms upon the former report of the association, with a view to the improvement of future reports. He also called attention to the fact that somebody must look after the matter of getting a continuation of the \$500 appropriation. He showed how important it was that bee-keepers write to their members of the Legislature, urging them to vote for the appropriation.

Secretary Stone said that there were still copies of the report on hand, and money with which to pay postage. If bee-keepers or their friends wished for them, they could be had on application.

S. N. Black said that a member of the Legislature almost sneered at him when he asked him to vote for the appropriation bill. He (Black) went home and wrote to him and several other members, long letters explaining matters. They were surprised at what they learned, and very willingly voted for the bill.

J. M. Hambaugh advised working in conjunction with the horticulturists.

J. A. Green—I approve the views of Mr. Hambaugh, and would suggest that a copy of our report be sent to each member.

President Hambaugh said there was no danger but what the horticulturists, at least some of them, needed educating in apicultural matters. At a farmer's institute he had been put upon the programme for a talk upon bees. In the course of his remarks he alluded to the value of bees in fertilizing blossoms. Some were astonished, and one man was inclined to take issue with him.

Frank Benton suggested the getting from each county a list of the honey-producing flora of that locality. From these

reports could be made a sort of floral map of the whole State. An inquiry in regard to the honey-producing value of any part of the State could be easily answered.

In regard to affiliation with other associations, Mr. Benton thought it a good thing. He would have the small associations within the State affiliate with the State Association, and the State Association with the North American. He would have each association send a delegate from each State Association, and the result would be that the attendance at the North American would always be sufficient to secure reduced rates.

J. H. Larrabee had been gathering statistics from the whole United States in regard to the honey-producing resources of different localities, and getting up a map something like that suggested by Mr. Benton.

Request of the Illinois Experiment Station.

Mr. Thomas G. Newman offered the following resolution, which was adopted:

Resolved, That in case of recognition by the Director of the Experiment Station of Illinois, that this association name a man to fill the place of conducting experiments in apiculture.

By vote, it was decided that Mr. J. A. Green should be the man that should be recommended for the position.

Adulterators of Honey.

Mr. M. H. Mandelbaum offered the following resolution:

Resolved, That this convention recommend to the publishers of the various bee-papers, that they secure an affidavit or contract from all the firms quoting honey in their honey column, that they will not sell adulterated honey or bees-wax, they knowing it to be such.

J. A. Green thought it scarcely a business thing. A firm that would adulterate honey would not hesitate to furnish a false affidavit.

Mr. Mandelbaum—You get the publishers to get such affidavits from dealers who quote in their columns, and if they continue to adulterate, our firm will attend to them.

Thomas G. Newman—It is possible that Mr. Mandelbaum has struck a scheme whereby we can reach the adulterators.

The resolution was adopted, and W. Z. Hutchinson instructed to bring the same matter before the North American at its next meeting.

Mrs. L. Harrison, of Peoria, Ill., read the following essay upon

The Most Important Function of the Honey-Bee.

What is the most important function of the honey bee—the production of honey and wax, or the fertilization of flowers?

In the account of the creation, as given in the book of Genesis, the command was to multiply and replenish the earth, and that every plant should bring forth seed after its own kind. There is harmony in nature, and there is always an appointed means to accomplish a desired end. Plants cannot walk like animate nature; therefore, there must be a foreign agent to carry a message from one to another.

In some families of plants, as the grasses, cereals, palms, and of our forest trees, the lone missiles are carried by the wind, and many times for great distances.

In other families of plants, insects are appointed agents to perfect this union. In California the Smyrna figs do not bear fruit, because their fertilizing agent has not been imported. Neither does *Dicentra spectabilis*—that beautiful flower so much admired—bear seed, for its moth has never been brought from China, the native habitat.

Since the time Adam and Eve dwelt in the Garden of Eden, the honey-bee has been his companion and co-worker, as the special agent for the fertilization of cultivated crops. When this continent was discovered, there were no honey-

bees, for the wild flowers and grasses did not need their agency; but when the white man came, bringing his little fruit trees and seed with him, then "the white man's fly" appeared. There were a few insects that fertilized the bloom of wild apples and plums, but they were few and far between.

During the blooming of the fruit trees, if there are no honey-bees, there will be little fruit set. This was exemplified the past season, for, during its bloom, there were long-continued rains, which washed off the pollen, and confined the bees to their hives.

CLOVERS (*Trifolium*.)

This is a family of plants of such great value to farmers and to the people at large, that their worth cannot be over-estimated, for he who has grass has meat; and he who has clover, has milk and honey. Clover makes an excellent pasture, and good hay, and one of the best fertilizers known, when plowed under in its green state. Mr. T. B. Terry, the great potato man of Ohio, enriches his fields by plowing under clover, and in this way obtains no seeds or noxious weeds. There are forty different kind of clovers in this country, many of them to be found on the Pacific coast.

RED CLOVER (*Trifolium Pratense*.)

This is the most valuable for soiling purposes of all the clovers, and is not dependent upon honey-bees for its fertilization, but upon bumble-bees (*Bombus*), as its tube-like corollas are too long and narrow for the bees to reach the nectar, where it is grown upon rich lands. If, from any reason, either by drouth or poor soil, the heads are small, and the tube-like corollas short, the bees are able to reach the nectar, and the progeny of some queens have also a longer proboscis.

I would like to put in a plea for the poor, abused bumble-bees. The Australians discovered that no seed matured upon red-clover, and imported bumble-bees, when they could grow seed in abundance. Notwithstanding their good service

to farmers, they make war upon them continually, destroying their nests. Would it not be better to cover their entrances to their nests with screens, confining them in while workmen and horses are near, than destroying them? The first crop of red clover bears but little seed, for this reason, that there are so few bumble-bees early in the season, as only the queen survives the winter.

ALSIKE CLOVER (*Trifolium Hybrida*) AND WHITE CLOVER
(*Trifolium Repens*.)

Alsike clover is a first cousin to both white and red clover, and resembles them both. It yields more nectar than white, and is preferred by the bees. The first crop yields seed, and has the ability of taking care of itself, by re-seeding.

By cutting Alsike clover, just as it comes into bloom, it will then bloom in August, which will fill the interregnum between white clover and fall flowers.

The praises of white clover have been so aptly sung, that I do not feel able to add anything thereto. For these clovers we are indebted to the honey bees, for they would be rare plants, with only an occasional specimen, if the bees did not fertilize the bloom.

SWEET CLOVER (*Melilotus Alba*, *Melilotus Officinalis*).

I do not think that the good qualities of these plants are known and appreciated as their merits demand. It is a biennial, growing in poor, rough, gravelly lands, adding to their fertility, and preventing washing. It adds a sweet perfume to hay when moved away with it, and animals learn to relish it. It shows itself so early in the spring before other clovers, and is greedily devoured by fowls, and furnishes bee-pasture from June until frost.

HONEY AND WAX.

"My son, eat thou honey, because it is good," was uttered many centuries ago, by one of the wisest of men, and is just as good food now, as in the past. Chemists cannot

manufacture it; nature has her own laboratories in the corollas of flowers, and how it is distilled is one of her own secrets.

Honey is not only good for food, but is used by the *Materia medica* for the alleviation of ills which the flesh is heir to, as well as the sting of the bee, which is a powerful antidote for the alleviation of distress.

Chemists cannot manufacture wax—it is the secretion of the honey-bee, and is used in many ways in the arts and sciences.

After a careful revision of the functions of the honey-bee, the most useful to the world at large is the fertilization of plants, and the bees should be the necessary adjunct of every country home.

MRS. L. HARRISON.

J. H. Larrabee—I notice that Mrs. Harrison's essay says that cattle learn to like sweet clover, and I think she is correct about the matter. I think they do not like it until they *learn* to like it. At the collage we made some silage from sweet clover, and a horse that had been accustomed to silage ate it quite readily, while some cattle not accustomed to silage would not touch it.

S. N. Black said that sweet clover would live several years if not allowed to go to seed. He had not been successful in getting it to grow.

J. A. Green advised the setting out of small plants. If they thrive it would show that the conditions were adapted to its growth.

J. H. Larrabee—At the college we sowed some on both sand and clay. That on the sand died from the drouth when it was about two inches high. That on the clay lived and did well. This year it was so rank that a man would pass through it only with difficulty. I have never been able to secure any honey that I would pronounce pure sweet clover, but have had the bees get enough honey for sweet clover so that they would not rob.

J. A. Green had secured honey that was so clearly sweet clover that the sweet clover odor and taste were plainly discernible.

Mrs. N. L. Stow, of South Evanston, Ill., then read the following essay on

The Outlook for Apiculture.

The bee-keepers of Illinois are to be congratulated that they are represented by an organization that has started out with such flying colors—I was going to say, referring to that splendid piece of work, "The First Annual Report of the Illinois State Bee-Keepers' Association"—but I will amend that, as there is nothing of show, or brag about it, but solid, practical work, that shows that the first association was made up of men well fitted to represent our industry in this grand State of Illinois, and that they have brains and wit enough to carry out any projects that will benefit, advance or protect our interests.

But what of the industry itself? Will it prove worthy of its advocates, in face of three or four years of almost failure? Bee-keepers as a class are optimists, but "hope deferred maketh the heart sick." Will men advocate specialty now, as they did a few years ago? I think not. Monopoly is the great cry of the day in the business world; but, thank God, here we have something that cannot be monopolized any more than sunshine, fresh air and beauty, and all of God's best gifts to man. It is true they can be perverted, polluted and adulterated, but honey is shed around us like the dew—Nature's own product any one may gather and eat—if they will only keep bees, and the season is propitious.

The time has been, doubtless, and may be now, in some favored localities, where large apiaries may be carried on successfully, but, as our State becomes more and more densely populated, they will be more restricted. Our cities and towns are growing larger, and the land outside of them is being used for market gardens to supply the inhabitants with vegetables. Our natural forests are being cut down to make

room for more towns or farms, and even our swamps and marshy lands are being drained and cultivated, and land is land, and must be made to yield something to enrich its owner. No more weeds in the fence corners!

With two such cities as Chicago and St. Louis to feed, our State must become more and more a garden State. What, then, is the remedy and hope for apiculture? It is with the farmers, horticulturists and small bee-keepers; let them make bee-keeping a part of their stock in trade, not as a "side-issue," to run itself if it can; but, with intelligence, improved methods, and the right care at the right time.

But, it might be said, that swarming, putting on sections and taking off, comes just when a farmer is the busiest. Then, let him do what has been done with marked success in many instances—bring out his wife, or daughters, to help him. Let them have more help in the kitchen, and they will, when once they are educated up to it, be glad to make the change. It is for this reason I have consented to fill this place to-day.

My experience proves to me that women can be valuable helps in the apiary, and, if they choose, *can* carry on the work alone; but, as there is much lifting and hard work about it, I would have them fitted to take charge of the work, or "boss" it, and call in help when needed. Let them see what a perfect piece of art a section of comb honey may be, and they will be enthusiastic to produce something like. Let them have bee literature, with the mutual benefit of exchange notes and ideas, and, *most especially, an interest in the profits*, and instead of the complaint that farmers and small bee-keepers break down prices, the State will soon depend upon upon them for its honey.

So, then, it may be that the great underlying hope of this most honorable industry, as of much that is good in the world, rests in our women. Give them a chance.

MRS. N. L. STOW.

Apiarian Exhibit at the World's Fair.

After the reading of Mrs. Stow's essay, Mr. H. D. Cutting asked what had been done about having an exhibit at the World's Columbian Exposition. This started the World's Fair business again.

In response to an inquiry, Mr. F. W. Clarke said that the exhibits from Canada would be both private and governmental; but the Government would foot the bills in either case. The Government would pay for a man to come over and put the exhibit in place. Mr. Allen Pringle is the man who is to do this work. The Government will also pay freights and for the packages. The honey will also be sent over in tin, and put in glass after its arrival.

Secretary Stone had just offered a resolution to the effect that unless the Illinois bee-keepers received some help from the State, they would make no exhibit, when the committee from the Agricultural Board was announced.

Appropriation for an Apiarian Exhibit at the Columbian Exposition.

The chairman of the committee said in substance that, having recognized and aided other kindred societies, the Board was inclined to be equally liberal with bee-keepers. (Cheers). They did not know what bee-keepers wanted, and wished to confer with them for that purpose. They were not sure that bees ought to be allowed in the building, but that was a matter for future consideration.

The two committees, the one from the State Board and the one from the bee-keepers, went out to confer, and the resolution offered by Secretary Stone was laid on the table, and a recess taken. Upon the return of the committees, the convention was again called to order.

The chairman of the bee-keepers' committee said that he had found the other committee favorably inclined to do something for bee-keepers, but bee-keepers must first say exactly what is wanted.

The chairman of the Agricultural Committee said that no "lump" sum would be appropriated. Bee-keepers must first say what they want. They would rather give \$1,000, if assured that a splendid exhibit would be made, than to give a less sum for a meager show. But the bee-keepers must first say what the money is wanted for, so that it can be shown in what manner the money is to be used, then the matter will be taken under consideration. Money would be appropriated to be paid out upon the proper vouchers, but no "lump" sum would be given to bee-keepers to do with as they pleased.

Mr. Newman moved that the bee-keepers' committee meet the committee from the State Board the next morning at 8 o'clock, and lay before it plans that would enable them to take some definite action. Carried.

The convention then adjourned to meet at 2 p. m.

SECOND DAY—AFTERNOON SESSION.

What Money Shall be Asked For?

Mr. Newman said that money would be needed to pay for the glass cases, to pay freight, and for some one to look after the exhibit, and if there was to be competitive exhibits, there would be money needed to pay the premiums. The most important question to be settled now was, Shall there be a competitive exhibit?

S. N. Black moved that there be no competitive exhibits, and that bee-keepers be asked to contribute honey and wax to make an exhibit; the understanding being that all goods so furnished shall be returned free of cost.

Frank Benton advised a contributed exhibition instead of a competitive one.

W. Z. Hutchinson and J. A. Green took the same ground. They thought that a competitive exhibit would bring out too many duplicates. Upon motion, a committee composed of

Wm. F. Clarke, Thomas G. Newman and S. N. Black, was appointed to decide upon what should be asked of the State Board of Agriculture. The committee was instructed to ask for \$1,000, all disbursements to be made upon proper vouchers.

At this time Messrs. W. F. Clarke and Frank Benton were made honorary members.

Rearing Queen-Cells.

J. A. Green had used the Doolittle method of rearing queen-cells, and secured most excellent queens. He had tried the Alley plan, and did not get quite so nice queens.

Marking of the Carniolans.

Frank Benton said that in Carniola the pure Carniolans were a dark, steel-gray color, with a white or whitish ring at the lower edge of each segment. The bees are rather larger than the blacks or Italians. The queens are of a dark, copper color. There may be other markings, but they are exceptional. The dark Carniolans are more gentle than those having a dash of yellow blood in their veins. Irascibility is a sign of impurity. He did not think them any better workers than the Italians, but they were more prolific. He preferred Carniolans in their purity, but if compelled to choose a cross, he would have Carniolan blood as one of the factors. He preferred it to Italian blood.

At this stage of the proceedings, Thomas G. Newman, George W. York, President Hambaugh and Secretary Stone were appointed a committee to present to the committee from the State Board the resolutions that the committee had prepared in regard to what was wanted in the way of an appropriation to enable the society to make an apiarian exhibit at the Columbian Exposition. This committee was given full power to act.

This really ended the World's Fair business, and what little time remained was devoted to the discussion of some of the queries that had accumulated. The question first asked was,

What is the Average Weight of an Average Colony on November 1?

W. Z. Hutchinson thought it about four pounds. J. H. Larrabee had been weighing some average colonies in eight-frame Langstroth hives, and some of them weighed as much as eight pounds. He placed the weight at six pounds. J. A. Green said three pounds. Mr. Hambaugh said four. Mr. Benton said eight. Secretary Stone had once wintered two colonies in the cellar, when each colony weighed only five pounds, as the weight of bees, honey and comb. But they died as soon as taken out of the cellar.

Large Colonies—Are They Desirable?

J. H. Larrabee had tried wintering extra-large colonies, and they did not seem to do well.

President Hambaugh preferred large colonies wintered out-of-doors, with substantial protection.

W. F. Clarke said that strong colonies were much more able to successfully combat foul brood.

J. A. Green said that a good honey-flow often helped to cure foul brood. Sometimes it seemed as though it was a cure of itself.

Bee-Keepers Recognized by the Government.

Mr. Thomas G. Newman called attention to the fact that the Government had sent Mr. Frank Benton to this meeting of bee-keepers. The Government had thus recognized bee-keepers, and he offered the following resolutions, which were adopted unanimously:

WHEREAS, The United States Department of Agriculture at Washington, D. C., having shown, in a measure, its recognition of our industry by instituting certain experimental work in apiculture, under the Division of Entomology, and also by sending the Apiarist of the Department, Mr. Frank Benton, as a delegate to this convention; and

WHEREAS, Desiring to express our great appreciation of this recognition of the industry which we represent, and of the courtesy which has thus been shown to us, be it therefore

Resolved, That our thanks are hereby tendered to Secretary Rusk, Assistant Secretary Willits, and to Dr. Riley, Chief of the Division of Entomology, for their action in the matter; and

Resolved, That we formally and earnestly request a continued representation of apiculture at the Department; and

Resolved, That our thanks be tendered Mr. Frank Benton for his assistance and interest in our proceedings; and

Resolved, That the Secretary of the Illinois Bee-Keepers' Association transmit copies of these resolutions to Secretary Rusk, Assistant Secretary Willits, and to Dr. Riley.

Mr. Benton said that he had been asked to write an essay on "Modern Bee-Keeping in Europe." He had rubbed the propolis off his hands, but as he started in, the old memories came crowding in, and he found his eyes dim with tears. He threw away his paper and decided that his talk should be informal. He gave many interesting accounts of bee-keeping in Europe, all of which showed that bee-keeping across the waters was far behind the times, as compared with that of this country.

On motion of Mr. Newman, it was voted to pay W. Z. Hutchinson \$20 for his services as reporter.

The committee appointed to meet the committee from the State Agricultural Board, reported as follows:

Your committee appointed to meet the committee from the State Board of Agriculture, would report that they favor an appropriation of at least \$1,000 for the purpose of making a creditable display of apiarian products and implements.

They also desire this Association to formulate plans for an exhibition, and to state for what purposes the money is required, before the appropriation is made.

THOMAS G. NEWMAN,	}	<i>Committee.</i>
J. H. LARRABEE,		
J. A. GREEN,		

A report of the committee on Apicultural Experiments was made as follows:

Your committee on Apicultural Experiments would submit the following:

WHEREAS, By the Hatch Act, which establishes and equips an Experiment Station in every State and Territory, and appropriates \$15,000 annually to each Station, to be used exclusively to further research and experiments in the industrial pursuits; and

WHEREAS, The pursuit of bee-keeping offers a grand field for such research and experiments; for upon the work of the bees and other insects depends the cross-fertilization of the flowers and the consequent production of fruits and vegetables in the greatest abundance, and of the most perfect kind; and

WHEREAS, Quite often foul brood and other diseases have decimated the bees in certain localities, and a short crop of fruits and vegetables have been the result, because the pollen masses were not carried from flower to flower by these "marriage priests" to fertilize them; and

WHEREAS, It is the appropriate work of the experiment station to make thorough and minute examinations of such microbes as attack the bees, and leave disease and death in their trails, and to give information which will aid bee-keepers to prevent or cure such diseases; and

WHEREAS, Those in charge of the experiment stations cannot be expected to know what is transpiring in the different apiaries of the State of Illinois, only as such things are brought to their notice by apiarists, it is therefore advisable to have a good bee-keeper appointed, at a moderate salary, to keep a sharp look-out for such matters, and present them to the proper authorities at the experiment station, as well as the Illinois University, so as to be able to take advantage of the wisdom of the professors in these institutions, and also to serve the interests of the pursuit of bee-keeping; therefore, be it

Resolved, By the Illinois State Bee-Keepers' Association, in convention assembled, at Chicago, this 19th day of October, 1892, that we commend the foregoing facts to the consideration of those having the United States appropriation of \$15,000 in charge, in the State of Illinois, and ask that they appoint a bee-keeper of ability and experience, acceptable to this association, to studiously watch for and present to them, such matters as should receive the attention of the Director of the Experiment Station and the professors of the University of Illinois.

THOS. G. NEWMAN,

MRS. L. HARRISON,

GEO. POINDEXTER,

Committee.

The foregoing was passed unanimously, and Mr. J. A. Green selected to represent the interests of Illinois bee-keepers.

Mr. Larrabee presented the following resolution, which was unanimously adopted:

Resolved, That we, the Illinois Bee-Keepers' Association do thank the managers of the Commercial Hotel for the courteous treatment received, and many favors extended to us during this meeting.

The meeting then adjourned to meet in Springfield, Ill., at the call of the Executive Board.

On the morning after the adjournment of our Chicago meeting, the committee from our meeting appointed to meet the committee from the State Board, performed their duties with the following results:

When our case was laid before the committee from the State Board at eight o'clock, it looked as though our sailing would be clear and without obstruction. But when the Board

brought our case before its full session we found, to our dismay, that our friends were, without exception, all of them in the committee, and the vote for our appropriation for the World's Fair Exhibit stood nine for, and eleven against.

Thus ended our hopes for a showing at the Great Fair. While they virtually say to us, you may help with your money and your presence, but we want none of your wares.

JAMES A. STONE,
Secretary.

REPORT
OF THE
Illinois State Bee-Keepers' Association.

The fourth semi-annual meeting of the Illinois State Bee-Keepers' Association, met in the Senate Judiciary room of the Senate Chamber at Springfield, Ill., on December 14, 1892, at 10 a. m., for a two days' session, with President J. M. Hambaugh in the chair. The meeting was opened with prayer by Rev. T. D. Logan, of the First Presbyterian Church, of Springfield.

The minutes of the last meeting were read and approved.

The following members paid their annual fees for 1893:

J. M. Hambaugh, Spring.
C. P. Dadant, Hamilton.
Chas. Dadant, Hamilton.
A. N. Draper, Upper Alton.
S. N. Black, Clayton.
Geo. E. Robbins, Mechanicsburg.
P. J. England, Fancy Prairie.
James A. Stone, Bradfordton.
D. D. Cooper, Sherman.
W. J. Finch, Jr., Springfield.
Geo. Poindexter, Kenney.
Chas. Becker, Pleasant Plains.
A. Phelps, Springfield.
Elias Robinson, Carmi.
C. V. Mann, Riverton.
James Poindexter, Bloomington.
A. W. Spracklen, Cowden.
J. Q. Smith, President Central Illinois Bee-Keepers'
Association, Lincoln.
Jas. Forncrook, Watertown, Wis.

The following sent in their fees by mail just before or after the meeting:

Peter Blunier, Roanoke.
B. Bevier, Bradford.
E. T. Flannagan, Belleville.
Aaron Coppin, Wenona.

Advancing Bee Interests—Caring for Honey.

Remarks on "How to Advance the Interests of Bee-Culture," and "How to Care for Honey," brought out some good thoughts.

Mr. Robbins said that honey, whether comb or extracted, if properly cared for, would grow better by age. He waited for his honey to be sealed before extracting.

Mr. Becker never waited for his bees to seal or cap the cells before he began to extract, and he never had any to spoil. He did not approve of too small a package for extracted honey, while Mr. Robbins thought we ought to have very small packages for it.

Mr. Dadant said the sealing of honey had nothing to do with the ripening of it, and that the package ought to be larger when honey was cheap, and smaller when it was high. He said the time was coming when honey would be as common as butter.

Mr. Finch said that when a trade in honey is established it can be sold in small packages.

Mr. Dadant said that it only takes five or six days to ripen honey.

Mr. Hambaugh said the consumer will buy it in whatever shape it is put up. He compels his buyers to furnish the cans to put the honey into. He thought the amount of the blooms had nothing to do with the flow of honey. It was the conditions of the weather which caused the blooms to furnish honey, or not to furnish it.

Mr. Black thought there ought to be a large package for wholesale, and a small one for retail trade.

On motion, a committee of three was appointed to confer with the other associations in session in the State House, in regard to a union meeting at night. The committee were Chas. Dadant, James Poindexter and S. N. Black.

Adjourned until 1:30 p. m.

AFTERNOON SESSION.

At 1:30 p. m. the meeting was called to order with President Hambaugh in the chair. The President's address was read and highly applauded.

President's Address.

Once more by the Providence of God we are permitted to meet again to council upon the various topics that may be brought to our consideration. Let us not be forgetful that it has pleased Almighty God to call to His reward one of our oldest and most respected members, Brother J. A. Kennedy, of Pasfield, this State, since our meeting one year ago in this city. We are by no means eloquent to-day with words of congratulation upon our success and wonderful achievements in the apicultural world, but you know the old trite saying is, that the darkest hour is just before the dawn, let us hope that the clouds will soon drift away, and a more propitious season dawn upon us.

The last two seasons in Illinois have been very demoralizing to the bee-keepers, from a financial point of view.

The season of 1891 will long be remembered as the season of dry weather throughout a large portion of the United States, and, while there seemed to be insufficient moisture in the elements for the proper growth and development of vegetation, it seemed to be especially adapted to promote the thorough disgust of the enterprising and expectant apiarist.

You have doubtless realized how pleasant it was to peep into the heavy laden supers, with their marble white cap-

pings, puncture a few cells and note the dusky, sooty stuff trickle and crawl over the exterior surface, and then note what sweet exclamations of unbecoming expletives would come unsolicited from your lips. We do not desire to awaken your smouldering feelings of disgust, but, I believe, you are in hearty accord with me when I exclaim: May the great Jehovah deliver us from another "honey dew" season. I am not sure that to the extreme dry weather we can attribute the cause of this strange phenomenon, but that the insecticides or plant lice, supposed to be the source from which this peculiar sweet is derived, can multiply and increase much more undisturbed in dry weather than in wet, will admit of but little doubt.

Quite the reverse of 1891 have we experienced the season of 1892. A season of floods and high waters, continuous rains throughout the spring and early summer, with sharp extreme temperature, and other unaccountable electric and climatic causes, have again caused a dearth of nectar, and the visitations of "our little pets" to the flora of mother earth, have not financially awarded their owners to the extent that they feel like spending a great amount of money attending Bee-Keepers conventions, etc. Hence, the slim attendance here to-day.

But let us not be despondent. Very frequently reverses prove to be blessings in disguise.

To the observant citizen it ought to forever check the idea that the Bee-Keepers as a class are adulterators, from the fact that no other kind but the dark honey dew could be found upon the market in our section that was produced in 1891, where it was secured from the honey producer direct. There are a few exceptions to this rule.

Where apiarists were isolated, entirely out of reach of tracts of timber, some fine honey was secured, but the exceptions are few within the borders of the State of Illinois.

During my incumbency as State Representative, I found it very essential that I should obtain some statistics as to the honey product of our State, and as the census report for

1890 had not been sufficiently compiled, I was obliged to resort to the census report of 1880. The report will show the entire products of the States and Territories as:

Honey.....	25,743,208 lbs.
Wax.....	1,105,689 lbs.

PRODUCT OF THE STATE OF ILLINOIS.

Honey.....	1,310,806 lbs.
Wax.....	45,604 lbs.

From this you will discover that the State of Illinois produced, for that year, over one-twentieth (1-20) part of the entire honey and wax product of the United States.

If we will multiply the 1,310,806 pounds of honey by fifteen cents per pound, about the average price of honey at those times, we will have 1,310,806 times fifteen cents, which equals \$196,620.90; and the 45,604 pounds of wax, at twenty-five cents per pound, equals \$11,401.00. Total honey and wax product, \$208,021.90.

We also find, according to the census of 1880, that the orchard product of the State of Illinois, sold and consumed, amounted to \$3,502,583, which, in accord with my figuring, will make the honey and wax product of the State equal in value to about one-sixteenth of that of the orchard product; but it must be remembered that the orchards all occupy valuable land, and if a difference was drawn between the products of the soil the orchards occupy, and the returns from the fruits raised thereon, it would probably augment the condition of affairs over one-half, and the bee industry would stand equal in value to one-fifth or one-sixth of that of Horticulture. It must be remembered that we occupy comparatively no territory, and our product is largely the savings of what would be otherwise lost to the human family and the mercantile world. Let us also not lose sight of the fact that our horticulture brethren are dependent upon the work of "our pets," in early spring, for the proper and perfect crop fertilization of their fruits. To the doubting I will say, can

any better proof be wanted than the failure of the last two years of our apple crop? It cannot be attributed to the lack of bloom, for about the usual amount bedecked our orchards, and many were enveloped, as it were, in a robe of snow. But there was a sparse visitation from insects, in consequence of the prevailing cold weather, hence fertilization was very imperfect, as the absence of the crop clearly demonstrates. While the successful fruit grower should desire the bees to fertilize his fruit bloom, the bee-keeper desires the honey from the bloom in early spring, to stimulate brood rearing, and to prepare our colonies for the honey harvest later on. Why, then, should there not be a more fraternal bond of fellowship between the two societies? The horticulturist and the bee-keeper should go hand in hand, as the one is essential to the other in its nature. Let us court a more brotherly feeling for our fruit growers and I am sure they will reciprocate our favors, and we will enhance the interests of each.

At our meeting in Chicago, one year ago, the following resolution was unanimously adopted before our organization:

To the Honorable Board of Agriculture of the State of Illinois:

The members of the Northwestern Bee-Keepers' Society, in convention assembled, do hereby respectfully petition your honorable body to allot, for a creditable exhibit of the products and appliances of the apiary, a just proportion of the amount appropriated by the Illinois State Legislature, for the display of the agricultural products of this State, at the Columbian Exposition to be held in the city of Chicago, in 1893.

J. M. HAMBAUGH, *Chairman.*

I must state here, brother bee-keepers, that the whole matter has become unpleasant and disgusting to me, and has somewhat shattered my faith in the honesty of humanity, and will, in the future, cause me to look with an eye of suspicion upon all public transactions, and to base no confidence whatever in the bare assertions and promises of public servants. I am aware that this is strong language, but my

experience will justify it, as will be seen in the sequel. You are doubtless acquainted with the fact that in accord with action taken by this society, a bill was presented to the Thirty-seventh General Assembly, asking the State to appropriate \$5,000 for the purpose of making a suitable apiarian exhibit at the Columbian Exposition, in 1893. You probably know that it died the death that knows no waking, in company with many more bills of a similar nature, among the files of the committee on Columbian Exposition.

When it became apparent to me that there was no prospect to obtain any direct legislation, save by an amendment to the original bill, I addressed the following letter to each and every member of the State Board of Agriculture:

SPRING, ILL., February 28, 1892.

HON. L. FUNK, Shirley, Ill.:

My Dear Sir: Under what class do you propose to allow a set-off of the proceeds of the State appropriation for the apiarian exhibit. I see by the *American Breeders' Journal* that we are not recognized in the live stock exhibit, and Bro. Newman writes me that we are ignored, and I am to infer from that, that we get no appropriation whatever.

Now, please write and let me know the correct situation. Members of our State society are writing me to appoint a day for a called meeting, to confer as to the proper mode of procedure, and I must know at your earliest convenience what we may expect. We are certainly as distinct an industry as that of horses, cattle, sheep, or poultry raising, and deserve recognition to the extent that we stand financially with other industries. This we have asked, and nothing more, and to which the members of the State Board of Agriculture stand pledged, by promise, to grant us.

We desire to know the exact situation as the display of honey must come from this year's crops, and steps must be taken right away, in order to secure it in abundance and in its most attractive forms. If Brother Newman is correct, and we get no financial recognition, please state why you

should so violate your promises and sorely disappoint us. Also state how you expect us to bring about an apiarian display, in keeping with the recognized industries, and commensurate with our State's greatness, etc. We do not wish to be found lacking, and give us a chance and we will do honor to you, as well as our great State, but under the present conditions, as we understand them, we are all broke up and know not what to do. Please write at your very earliest convenience. Very respectfully,

J. M. HAMBAUGH.

In prompt course of mail I received the following letters from the various members composing that honorable body:

SHIRLEY, March 2, 1892.

HON. J. M. HAMBAUGH, Spring, Ill.

Dear Sir: Yours of the 23d inst. at hand, and in answer to your inquiry concerning the apiarian exhibit at the World's Fair, from Illinois, will refer you to Hon. John P. Reynolds, Room 18, Montauk Block, Chicago. He is the Director in Chief of the Commission and its Bureau of Information. Mr. W. H. Fulkerson, of Jerseyville, is the chairman of the Live Stock Committee, and I believe your Mr. Newman, spoken of, was before them.

My impressions are that the National Commission will not permit any live bees to be shown upon the ground. A display of honey, beeswax, and such other component parts of the bee industry, might be shown in the Illinois State Building. But, as above stated, Mr. Reynolds has been put in charge for the sole purpose of giving information in every branch of the exhibits to be made. I don't know who it has been so full of promises. Every association of whatever kind claim as having been assured of the most liberal amount of funds being given them, to use at their own discretion. Now, the law clearly sets forth what kind of an exhibit the commission is required to make, and I have no doubt every industry coming under the purview of the

intent of the law will get its equal share and honors in the exhibits.

Hoping Mr. Reynolds will be able to give you a clear understanding in this matter, I am

Yours very truly,

LAFAYETTE FUNK.

CHICAGO, March 7, 1892.

HON. J. M. HAMBAUGH, Versailles, Ill.

Dear Sir: Your favor of the 29th ult. to President Funk, relating to an apiarian display as part of the State Exhibit in the World's Columbian Exposition, he has referred to me with request to write you on the subject.

In considering this feature, we are met at once by the rule of the National Commission, which forbids the exhibition of any "manufactured goods or products" in any State building.

I assume that such an apiarian display as you desire to make would necessarily include the appliances and devices used in the apiary, as well as the commercial product, if not the bees themselves. Otherwise, if confined to honey alone, it would not be as instructive as it can and should be made.

There is no hope that the rule referred to would be modified by the National Commission so as to permit an apiarian display, as part of the State Collective Exhibit in the State building, but it is expected the "Illinois Woman's Exposition Board" will be allowed to exhibit manufactured goods and products of women, in the space assigned them in that building. The State Commission and the Woman's Board are entirely, in all respects, separate and distinct, and the purposes and material of each exhibit are entirely different, as, of course, you are fully aware. If, therefore, an apiarian display could be arranged as illustrating one of the industries of women (and it is one in which women are largely engaged) I find no reason why it cannot form a feature, and a very interesting one, in the display of that Board; provided the rule of the National Commission shall be modified as

suggested, and their display in the Illinois building be made an exception to the general rule excluding manufactured goods and products.

Again, it is expected that the Illinois State Board of Agriculture itself, (not this World's Fair Commission, of course) will make an exhibit of the products of agriculture, horticulture, etc., in the appropriate buildings of the World's Fair. It might be practicable to include an apiarian display in those, if thought desirable. That Board will meet here, I think, on the 5th of April next, to consider matters pertaining to those exhibits, and I am sure the members would like to consult with you on the subject.

I do not see why an independent apiarian display should not be made by your association, in the appropriate department of the National Commission, if you so desire.

In regard to the Illinois Live Stock Exhibit, you will remember that this Commission has no other responsibility or duty in connection with it than to disburse the specific appropriation of \$40,000 in a manner to "encourage" an exhibit of live stock owned in Illinois.

Very respectfully and truly yours,

JOHN P. REYNOLDS,

Director-in-Chief.

SPRINGFIELD, ILL., MARCH 7, 1892.

HON. J. P. REYNOLDS, Chicago, Ill:

My Dear Sir: I enclose you verbatim copies of the correspondence that took place between us last winter while I was at the legislature. I have also the original letter from nearly every member of that honorable body (State Board of Agriculture), pledging themselves to us, some in even more forcible language than that contained in your own, that the apiarian industry should be duly recognized and a pro rata amount of the appropriation set apart for that purpose. I discover we are excluded from the Live Stock Department, and a letter to me from T. G. Newman, of the A. B. J., says we are ignored. I understand by this that we are to be

entirely excluded from any appropriations. I can't think this is possible after all the promises given me from the Board to the contrary, the letters of which are in my keeping. Some of those that have pledged themselves by letter are: Hon. E. E. Chester, Fifteenth District; Hon. J. W. Judy, Thirteenth District; Hon. James W. Washburn, Twentieth District; Hon. B. F. Wyman, Hon. E. C. Pace, Hon. A. B. Hostetter, Hon. B. Pullen, Hon. Samuel Dysart, Hon. J. Irving Pierce and others. I have just received a letter from Hon. L. Funk, in which he seems to doubt the promises made and so forth. I have thought that probably it would be a good idea to have fac-simile copies struck, and send to each member of the Board. This will certainly quit all doubts as to whether or not any promises have been made. But he referred me to you, stating that you can give me all the information I desired, and now I wish to know at once if we can expect any set-off whatever from the State appropriation, and, if so, about what amount.

If we get any set-off whatever, in what way do you expect to bring about an exhibit creditable to the industry and the State?

Having the honor of being the President of the State Bee-Keepers' Association, members are writing inquiries to me as to what shall be done toward making a creditable and suitable exhibit at the World's Fair. The honey, as you are probably aware, must be secured from this year's crop, and must be secured in abundance and in its most attractive forms, and, in order to do this, it is highly important that the bee-keepers should understand this at the very earliest possible moment. It is also essential that there be a perfect understanding between the State Board of Agriculture and the State Bee-Keepers' Association, in order to formulate the machinery that will bring about this work, and give us a chance to do ourselves and the State justice. As matters now stand we are completely in the dark, and know not what course to pursue. Give us a chance and we will eclipse anything of its nature ever seen in the United States, and,

confiding in your sense of honor and justice, we now appeal to you to make good your promises, and not entirely ignore our rights and trample on our industry. In conclusion, I will state I was a warm supporter of the State Board in preference to the creation of a new commission, as contemplated by the Merritt bill, and my vote will show that I supported the present Board to retain control of the World's Columbian Exposition, and there is but little question but I will be returned should I live until 1893, and I dislike having my confidence shaken, which will surely be the case if our bee-keeping industry should be ignored, after all their fair and honeyed promises.

Please let me know facts, and at your very earliest convenience.

Respectfully,

J. M. HAMBAUGH.

CHICAGO, March 8, 1892.

HON. J. M. HAMBAUGH, Spring, Ill.:

Dear Sir: I am in receipt of your esteemed favor of yesterday, enclosing copy of a letter from myself to you on the subject of an apiarian exhibit at the World's Columbian Exposition, written in reply to a letter from you during the pendency in the General Assembly of the bill providing for a State exhibit.

I wrote you yesterday addressed to Versailles (as given in the roster of the General Assembly), at the suggestion of President Funk, and hope it has been forwarded to you at Spring. I mentioned in that the meeting of our committee having bee culture in charge, which will be here Thursday, the 10th inst., and expressed the hope that you would be here at that time.

I will add now that I am more than willing, and very much in earnest, as I believe every other member of the Commission is, "to do all which the means at their (our) command, and the regulations of the National Commission, will permit them (us) to do in bringing bee-keeping and every other agricultural interest to the very front in their respective lines," as I wrote in reply to your former letter. Since

the bill with its amendments became a law, it is now with me simply a question: What does the law sanction, the regulations of the National Commission permit, and the means of the Commission justify? As to the means, I think that can be found without detriment to other important features of the exhibit so far as to accomplish what the law and the National Commission will permit.

I have received, to-day, a letter on the same subject from Mr. James A. Stone, Secretary Illinois State Bee-Keepers' Association. He describes the proposed exhibit as a "display of *honey*." If this is correct, I have no doubt of our right to include it in the agricultural product department of the State exhibit, particularly if it can be made to assist (as I think it can be) "in illustration of the widely different conditions of soil and climate under which rural husbandry is practiced in the various sections of this State," as the law defines the purpose of that part of the collection.

If, however, it is desired to make an "apiarian display," which shall include a complete outfit of all approved appliances and devices used by the apiarian in a live apiary, then the rule of the National Commission might apply to prevent it.

I trust you can be here Thursday and talk over this subject with the committee, every member of which I am sure you will find disposed to do whatever he can do conscientiously in this important matter.

Very truly yours,

JOHN P. REYNOLDS,
Director-in-Chief.

SPRING, BROWN CO., ILL., April 13, 1892.

HON. J. P. REYNOLDS, Chicago, Ill:

Dear Sir: Quite a while has elapsed, and still no tidings are at hand as to the final disposition of our apicultural claim against the State Board, and as to whether or not they intend to recognize it, and give us a chance along with our sister industries. It seemed to me you have had ample time, and I do know that the dilatoriness of the Board is bound to

work against us doing justice to our exhibit, as the season is rapidly advancing, and it will soon be too late to have put up in the many and varied fancy shapes we have had in contemplation for the event of the magnitude of the Columbian Exposition.

If you know anything at all that has been done, or is likely to be done, let me know. If we are to be entirely or partially ignored, we desire to know it at once.

Very respectfully,

J. M. HAMBAUGH.

CHICAGO, April 15, 1892.

HON. J. M. HAMBAUGH, Spring, Brown Co., Ill.:

My Dear Sir: Your favor of the 13th inst. is received. I have referred it to Hon. D. W. Vittum, of Canton, Ill., who is chairman of the committee of the State Board of Agriculture charged with the duty of making an exhibit of Illinois products in the National Agricultural Building.

From former correspondence and your familiarity with the law organizing the Illinois Board of World's Fair Commissioners, together with the rule of the National Commission excluding manufactured products from exhibition in State buildings, you are doubtless fully apprised of the obstacles to making a complete apiarian exhibit in the State building.

Mr. Vittum is probably able to give you the necessary information as to the possibility of making the proposed exhibit in connection or as part of the State Board of Agriculture display in the National building.

Very truly yours,

JOHN P. REYNOLDS,

Director-in-Chief.

Well, brother bee-keepers, in all fairness, would you not suppose this was ample assurance that we would be fairly dealt with? Could language, short of an affidavit with up-raised hands, be more calculated to put the matter at rest, so far as myself and the Association was concerned? And as there was a chance for a failure in the attempt to secure the

amendment, I concluded the promises put down to me in black and white, from the various members composing the State Board, was sufficient guarantee to us that we should receive recognition and our share of the appropriation. I looked upon it that their honor was at stake, and so I let the matter rest.

In connection with the petition from the State Bee-Keepers' Association, to the State Board of Agriculture, as read to you, I enclosed the following additional appeal to each member of that honorable body:

It is not necessary, I presume, to remind you of the importance of this industry, and attractiveness of displays at fairs where sufficient encouragement is given them, and I am certain you want no halfway, slipshod exhibition of this industry at the Columbian Exposition, and you realize the importance and absolute necessity of a liberal appropriation in this direction, that we may carry out our anticipations, and render an exhibit worthy of the occasion, and of the State. I therefore appeal to you to act upon this matter at your earliest opportunity, that we may know upon what we can rely, and make our arrangements accordingly. In view of your promises before I left Springfield, I am sure you cannot overlook or ignore our claims. Yours sincerely,

J. M. HAMBAUGH.

It was, probably, the last days of November or the first of December, that I mailed the resolution and letter to each member of the State Board of Agriculture, and no acknowledgement was ever received from either member. And so matters run on until in February, when a correspondence was opened and a voluminous amount of matter passed between us, and in order to do justice to them, as well as myself, I will read you a portion, that you may see their arguments and flimsy excuses for holding us in the back-ground.

Thus you will see that from various pretexts they have dodged and managed to beat us off on the most trivial and flimsy excuses, and we very well know that had they the disposition to do the fair thing by us, the differences between

the State Board, the National Commissioners and the State Bee-Keepers' could have been satisfactorily arranged. But our industry has been of such slight importance to them, that they have never sought an interview with us upon the subject; but upon the contrary, they have, in every way, evaded us, and any direct work along the line of a State apiarian exhibit. It was probably nearly three weeks prior to our call meeting in Chicago, that I addressed a letter to Hon. J. P. Reynolds, stating to him that the Illinois State Bee-Keepers would have a call meeting in the city of Chicago, October 18th and 19th, and made my last appeal to him. Among other things, I stated that I was satisfied that unless we received some recognition and assistance from the State Board, there would be no apiarian exhibit at the World's Fair from the State of Illinois. This letter was the result of a committee being appointed to wait upon our bee-keepers, during our session, the result of which you have heard in the minutes read by our secretary.

In all fairness, I must say that we are under many obligations to those members who so earnestly and determinedly championed our claims, and the pursuit before the State Board, ere the final ballot was taken, and so far as either of the members are concerned, that were friendly to our cause, and to our receiving fair play, we hope and trust they can take no offence at any thing that may have emanated from myself or any of the various members of the Illinois State Bee-Keepers' Association, and as regards the final action of the State Board of Agriculture, as to whether or not they should allow us the pitiful sum of \$800, to make a suitable apiarian non-competitive exhibit, I have the pleasure of presenting to you the yea and nay vote, as copied from the minutes of the State Board, when the question was called: Yeas—J. P. Reynolds, Byron F. Wyman, D. W. Vitum, Jr., E. B. David, W. H. Fulkerson, E. E. Chester, David Gore, J. M. Washburn, President L. Funk, (9). Nays—J. Irving Pearce, Wm. Stewart, A. B. Hostetter, Samuel Dysart, W. D. Stryker, John Virgin, Sheridan W. Johns, James K. Dickerson, Edward C. Pace, B. Pullen, (10).

Now, brother bee-keepers, I am done with this matter. I will simply say that I was ambitious to the extent that I desired to see an exhibition of our apicultural industry that would be in keeping with the magnitude of the occasion, and that of the other industries of the State. But, from the fact that nearly all other industries are cared for and nurtured by our State authorities, and our industry is left entirely in the cold, I am decidedly in favor of our exhibit remaining a blank, so far as the State exhibit is concerned. In view of the fact that many of our sister States have contributed liberally toward special apiarian displays, it looks to me like a burning disgrace to our State, after all their honeyed promises, to allow this important industry to be ignored; but I desire the facts to be made known, and the fault placed where it belongs. As stated in the outstart, this whole matter has become stale to me, and I desire to be released from any further participation in the matter. I may have made mistakes. "It is human to err," but I have done my best for you in the matter.

You are aware that the State Legislature will convene the fourth day of January, and there must be some one to take the initiative in behalf of the bee-keepers, if you desire any legislation in their behalf.

It must be determined at this meeting whether or not we are in need of the bill for prevention of spraying fruit trees with poisonous liquids while they are in bloom. You are aware, probably, that a bill to that effect passed the House during the last session, and was lost upon third reading in the Senate, it lacking but five votes of becoming a law. The question is, shall we ask the 38th General Assembly to pass this bill?

I notice that Canada has a law, recently enacted, to that effect. I am truly in hearty accord with Prof. Cook, in his able article on page 663, of the A. B. J., relative to "Adulteration of Honey; Need of Action by Bee-Keepers." Every bee-keeper in the United States should read this article. It is certainly worthy of our highest reflection and earnest consideration.

The producers of extracted honey are aware of the general public sentiment engendered against extracted honey, to the extent that its sale is very difficult, and hence our financial condition is very materially damaged, and all from that vile monster, adulteration. Let us, then, as Prof. Cook says, "Unite in one grand successful effort to utterly squelch it, to drive it from among us forever." Could we but enlist some senator or representative in our behalf, we might succeed in getting a law passed similar to those in several of our sister cities. Prof. Cook kindly gives us a copy of the Michigan statute upon the subject, which can be seen on page 664 of the A. B. J., but we need a law far more sweeping in its effects, and one that will embrace the entire United States. The Paddock pure food bill, that passed the Senate of the United States but died in the lower house, at the last session of Congress, had that end in view; and should it again spring to birth, we should contribute our mite towards inducing our Representatives in Congress to push and vote for the bill. We should also petition our North American brethren, while in session at Washington, to take some active measures in that direction. Let us not be found lacking in this important matter, for if we can assist in wiping out of existence this blight upon our profession, "it will be just cause for rejoicing among all the people."

It should also be determined at this meeting as to whether or not we are in need of a law to exterminate and protect us against the ravages of foul brood. If there is any truth in the letter of William McEvoy, Foul Brood Inspector for the Province of Ontario, Canada, as can be seen on page 666 of the A. B. J., we should at least be on our guard. I am not sure that such a law is needed, but it is a matter of no small import, and deserves our best counsel and closest consideration.

Before I close I would be derelict in my duty did I not congratulate the Society upon the first appearance of our Illinois Bee-Keepers' report—the first of the kind that has

emanated from the sisterhood of States. It is certainly a fund of information that will be sought for in years to come, as a criterion for our sister States, when they swing into line with Illinois with their first edition. Let us not be forgetful, brothers and sister bee-keepers, that we owe a debt of gratitude that we can never repay for the self-sacrificing and persistent labors of our worthy Secretary, Bro. James A. Stone, in its compiling and preparation for the press. It must be remembered that it had to be worked out of whole cloth, there being nothing like it in the United States. But that he has triumphed the work well shows, and the first Bee-Keepers' Report will stand the test of the most searching eye, the critic. Long live Bro. Jas. A. Stone

J. M. HAMBAUGH, *President.*

On motion of Mr. Becker, a committee of five was appointed for a legislative committee to recommend legislative measures, and report the following morning. The committee were: C. P. Dadant, James A. Stone, Charles Becker, George S. Robbins and George Poindexter.

The Secretary's report was then read, received and placed on file.

Mr. President, Ladies and Gentlemen:

In the year just drawing to a close, what can we say of it as an eventful year? Surely it has not been eventful for its honey flow. Last year was noted for its dark honey and large loss of bees.

This year, while it has not had a large flow of honey, it has had good honey and a good late flow, so that our bees go into their winter quarters in a better average condition. This is quite an event with our bee-keeping brothers and sisters. Besides this it has been an eventful year in the field of politics, though we do not think the landslide will affect our industry in the least, unless it remove the tariff they made an effort to impose on queen bees.

The most eventful thing of the year to us bee-keepers, which we will speak of at some length, is "The First An-

nual Report of the Illinois State Bee-Keepers' Association," the first report of its kind ever published, and it is with this report that your Secretary has spent much of his time during the past year.

When our last meeting convened at this place, we were in hopes that our report would be in print by the first of March; and it would have been, but for one thing. When our matter was almost ready for the press, it was urged that we have a series of questions sent out to the bee-keepers of the State, to be answered and embodied in the report. This was no small undertaking. With no names of bee-keepers, except those of our association—and they not very widely scattered—the question was, "How are we to reach them in all parts of the State?"

When our questions were ready, we started them out to every county in the State—directed to "most prominent bee-keepers"—taking care to direct to some post office in each county that was near some stream, thereby being more certain of reaching a prominent bee-keeper. This resulted in answers from sixty-five persons.

They were requested to answer on foolscap paper, written on one side, which some did, while others wedged their answers between the lines, above and below the questions, on the same slip with the questions, till it was a puzzle to make them out; and, as we did not think the printer was in his place to work out puzzles, we had them all to re-write.

These were the principal reasons for the delay of our report.

On the reverse side of our question slip sent out, was a request for the names and addresses of bee-keepers; and in this way we obtained the names of about two hundred.

So, when our report was ready, we sent it first to the members of the Association, then to the members of the Capital Bee-Keepers' Association, and then, as we had the time, to the other addresses obtained; and by using every means at hand for obtaining addresses, from Secretaries of other associations and otherwise, we have sent our

report into almost all of the States, and some to our bee-keeper friends in Canada. In all we have sent out about one thousand five hundred (1,500) and have about that number left.

When the expense is all paid of sending out our report to this date, we will still have of the appropriation left \$28.21.

When your executive committee began to consider the publishing of the report, it was thought it would amount to about two hundred pages, and that we would have as many copies printed as the appropriation would allow, which we found to be about three thousand; so the bids were taken on that basis.

When the bids were all in we were enabled to let the job to the Illinois Journal Company, at so much lower a bid as to give us a remainder in the treasury of the appropriation amounting to \$140.

When we began to send them out we found we had none too much money on hand to pay the required postage. It would not go at newspaper rates, but it required six cents straight to send each copy, and we tried every way to get them sent cheaper. So we see that in the sending out of our future reports, there must be a reserve for postage.

We have on hand, addresses of about one hundred bee-keepers in different States. If it be the request of this Association that they be sent reports, it shall be done.

It was suggested at our Chicago meeting that a copy be sent to each member of the State Horticultural Society, but no motion was made to that effect.

We are of the opinion that, as a State appropriation pays for the publishing of the report, it ought first to go to the bee-keepers of the State as far as needed, and then to others. This rule we have endeavored to carry out. But when we look at it in the light of the State Horticultural Society, the State pays a large appropriation for the publishing of their report, and for the Secretary's salary, etc., etc., and then the report goes to none but members of the Society. We will quote a few of the compliments our report has received:

A Secretary of another State (Missouri) Association, said: "It is the best thing I have ever seen of the kind. We hope to get, through the influence of your report, similar aid from our next Legislature. You ought to charge a dollar for it."

"Rambler" said: "It reflects great credit upon the labors of the Society. Such reports in every State, and sent to editors of newspapers would correct many of the false ideas about bee-culture, and give it a better standing among the other industries."

But, Mr. President, while all this is nice to talk about, it has all taken labor that can never be compensated. For no one—only those who have gone through like experiences—knows anything of the labor connected therewith.

And as there is much work connected with the Secretary's office that must be done gratis, let it not be a permanent one, but let it rest upon the shoulders of one and then another of our worthy members.

JAS. A. STONE, *Secretary*.

On motion, the further distribution of the Reports of 1892 was left to the discretion of the Secretary.

The Committee on Programme for the evening, made a report, which was accepted, that the other associations had all adjourned until the next day, and that they had left an invitation with the chief janitor, that any further attendants upon any of the associations, be invited to attend our meeting.

An essay was then read by P. J. England, on "Empty Combs and Packages for Extracted Honey."

Empty Combs and Packages for Extracted Honey.

A question of great importance to many of us, last spring, was, what shall we do with our empty combs? Doubtless a majority of us decided to render a portion of them into wax. Perhaps that was the best use to make of many of the old, inferior and crooked combs. But will it do for us to treat all of our combs in like manner? I answer most emphatic-

ally, no! I speak from experience, for I destroyed many combs, that if put to a proper use the past season, would have made a good advance on the credit side of bee-keeping.

The combs may be preserved in moth-proof boxes, and kept there until your bees have increased sufficiently to demand their use. But I would advise a different plan for their preservation, and that is, buy bees of your more fortunate brethren south of you, who usually have bees to sell at reasonable prices. I believe that throughout Central Illinois, nine years out of ten, bees purchased at or near the time of fruit bloom, will secure enough honey to safely winter and pay 100 per cent on the investment. I bought bees during the past season and they went far beyond the above figures. In fact, I have never failed to make bees pay for themselves when they were purchased on frames suitable to be transferred to my own hives. But my experience with box-hive bees has been quite the reverse; and my advice to beginners in bee-culture would be to let box hives severely alone, until they can successfully manage bees in good frame hives. But why were so many bee-keepers over stocked with empty combs this year? I speak for my own locality, and claim that the winter problem had nothing to do with the case, but that it was the failure of the bees to raise brood during the fall months of 1891, owing to a shortage of fall bloom, and almost a total absence of nectar in the bloom. As a consequence, when winter came, the bees were few in numbers and that few were mainly old bees whose days were nearly numbered. I do not know the exact loss of bees, but am quite positive that, within a radius of six miles from my apiary, the fatality of bees was not less than ninety per cent.

Then, when you have a surplus of empty combs, I would advise the purchase of bees from the south. Buy strong, three or four frame nuclei, transfer them to your own hives, give them empty combs as fast as they can use them, and at the close of the season extract the surplus honey and you will probably be surprised at the amount of honey received.

I run my apiary entirely for extracted honey, and find sale for more than I produce, My sales have usually been

made in buckets holding six and one-fourth and twenty-five pounds. But the above sizes are not suitable for the retail trade from stores. And that is a question of vital importance to the producers of extracted honey, viz: What sizes and what kinds of packages shall we use for the retail trade? If I were left to decide on standard packages, I would select as to sizes, packages holding from one to three pounds each, and, as to kind, would prefer glass. I would insist on the packages holding the amount specified. Of course, I believe in honest measure, but I know that you will receive no credit for putting one and one-fourth pounds of honey in a one pound bucket. I have been putting six and one-fourth pounds of honey in what are called seven pound buckets, but in the future I expect to leave out the one-fourth pound and still adhere to my usual price. If people allow me no credit for the extra one-fourth pound, it is certainly the part of wisdom to discontinue my donations in that line, collect those fractional parts of a pound in another six pound bucket, and thereby add another dollar to the credit side of the honey ledger.

There has been much discussion about the size of packages for comb honey, and great good has been accomplished. But there is no standard package for extracted honey, unless it is the sixty pound tin can, and that is from twenty to sixty times too large for the retail trade. Certainly something ought to be done to insure greater uniformity in sizes of packages for extracted honey. As it now is, the different kinds and sizes used is almost legion. Jelly cups, square cans, jam jars, fruit jars, tin buckets, tin cans, wooden kegs, etc.

A standard package would be a benefit financially, as it would cheapen their production. Comb honey can be placed on the market in packages costing the small fraction of a cent per pound for the honey contained. But to place a single pound of extracted honey on the market will cost from ten to twenty times the above amount, thereby putting extracted honey at a great disadvantage on the market with comb honey.

Then, let us agitate the question of a standard package for extracted honey, until we accomplish something beneficial to the fraternity.

P. J. ENGLAND.

In the discussions which followed Mr. England's essay, there was quite a difference of opinion in regard to drumming the bees out of the old hives, some claiming they could not do it, while others spoke of it as a matter of no difficulty.

Mr. Robbins never would drum bees out of the old comb until about swarming time.

Mr. Becker would drum bees out, taking care to save all the brood.

Mr. Dadant would take great care in saving all the brood, when drumming out of old hives.

Mr. Hambaugh would always transfer about the time of fruit bloom, smoking the bees a little before he started to drum them out. He used string to tie old combs in the frames, and the bees would pick them to pieces and carry them out, by the time the combs were fastened.

Mr. Dadant said strings bothered the bees too much; and that the bees sometimes got tangled in them. He used wire, bent L shaped at the ends, and drove them into the frames.

Standards for Judging Italian Bees.

The question box was taken up next, and the following question asked:

"Should there be two standards for judging Italian bees at fairs? If so, what should these standards be?"

Mr. Hambaugh did not see how we could have two standards for a single race of bees.

Mr. Dadant said the standard should be three yellow bands, whether they be bright yellow or leather-colored.

Mr. Smith said his experience had been that light-colored combs made light-colored bees.

George Poindexter said he believed in rearing the Italians that produce the most honey, regardless of color.

Mr. Dadant thought we could not decide which color was the best, as we did not know.

On motion a committee of three was appointed to investigate as to the steps to be taken for the affiliation of other bee-keepers' associations of the State with the State Association. The committee were S. N. Black, J. M. Hambaugh and J. Q. Smith.

On motion, the Convention adjourned to meet at 7 o'clock, for an evening session.

EVENING SESSION.

The Convention met at 7 o'clock, and the order was unfinished business.

The Treasurer's report was read, and showed a balance on hand of \$31.10 of the Association fund, and \$60.85 of the State appropriation.

Report on Affiliating Associations.

The committee on affiliation reported as follows:

We, your committee, appointed to examine Constitution with a view of adopting an article admitting bee-keepers' associations to affiliate with the Illinois State Bee-Keepers' Association, beg leave to submit to you the following report:

In view of the fact that we have no application for affiliation from other societies, that we deem it the part of wisdom to discourage the plan of affiliation, and recommend that the bee-keepers of the State join personally, thus placing every bee-keeper in the State on an equal footing with us. Mr. Smith assures us that their society prefers this plan, and will join us personally.

S. N. BLACK,
J. M. HAMBAUGH,
J. Q. SMITH,

Committee.

The report was discussed, and finally laid on the table.

The Convention then adjourned to meet at 9 o'clock the following morning.

SECOND DAY—MORNING SESSION.

On Thursday morning, at 9 o'clock, the meeting was called to order by President J. M. Hambaugh.

An essay by Dr. C. C. Miller was read by the Secretary:

Do Bee-Keepers Need an Experimental Station?

Many thousands of dollars are annually spent in agricultural experiments, the money therefor being taken from public funds. To prove the wisdom of this, needs no very extended argument. Only by actual experiment can a farmer ascertain many things necessary for the profitable prosecution of his calling. If in each township one farmer should make experiments for all the rest, the cost would thereby be greatly reduced; and if a single set of men at one place, having all the requisite appliances, with the power to command the most favorable surroundings, make the experiments for all the farmers in the State, then the cost is reduced to a minimum *per capita*.

Perhaps, however, the simple fact that in the different States these experiment stations are continued year after year, funds being freely voted for such purpose, is the strongest proof of the wisdom and economy of such outlay.

It is a notorious fact that, with very few exceptions, the interests of bee-keepers are utterly ignored in all the experimental stations. In our own great State of Illinois, I do not know that a single dollar of public money has ever been spent in apicultural experiments.

The utter neglect of this branch of agriculture can only be justified, if it can be justified at all, on one of two grounds. First, on the ground that the products of bee-keeping are too insignificant to warrant an outlay for experiments. Let us look at this.

Suppose that throughout the 55,000 square miles of the State all the various vocations are nicely adjusted, so that

all are full, just the right number of farmers, merchants, blacksmiths, etc., for the highest welfare of the State, only there are no bee-keepers. Now suppose a bee-keeper be dropped on each 10 square miles of territory with 100 colonies of bees. Then suppose an average crop of 50 pounds per colony, at an average price of $12\frac{1}{2}$ cents per pound. The 5,500 bee-keepers would produce $27\frac{1}{2}$ million pounds of honey, worth in round numbers \$3,500,000. Is that amount of clean-cut addition to the total resources of the State not worth considering?

The census of 1880 shows the potato crop of that year in the State of Illinois to be 10,365,707 bushels. At 25 cents per bushel, the value is \$2,591,427. Our estimated honey crop is worth about a third more than this. Of buckwheat there were raised 178,859 bushels. At 75 cents per bushel, \$134,143—not one-twenty-fifth the value of our estimated honey crop. Were there no experiments on behalf of potatoes and buckwheat? Of cheese, in 1880, Illinois produced 1,035,069 pounds. Figured at the same price as honey, that makes \$129,384. Multiply by 26, and it does not come up to honey. Do the cheese-makers have no attention at the experimental station?

Add together potatoes, buckwheat and cheese, and you must increase the combined value by half a million dollars to make it equal the honey. In view of the outlay made, and very properly made, for experiments relating to the three articles mentioned, it can hardly be said that the products of bee-keeping are too insignificant to warrant any outlay for experiments.

If it be objected that the products mentioned—potatoes, etc.—are the actual products of a year, while the amount of honey mentioned is only a possible product, please remember that experiments are made on the basis of possibilities, with the view of something different from what has been.

Or, it may be said, "If possibilities are to be figured on, then estimate potatoes not by the actual but by the pos-

sible, and the crop will assume one hundred times its present importance, for one hundred times the number of bushels *might* be raised." Please go back to our supposition, and that was that all the vocations were nicely adjusted so as to secure the greatest good to the greatest number, and in that case there will be just the right number of potatoes raised for the general good. If you increase the number of potatoes raised, it must be at the expense of some other crop; the additional potatoes raised will take the ground otherwise occupied with corn or something else. So there will only be a change of products, and as we have supposed a perfect adjustment, and disarrangement of this adjustment will make a decrease instead of an increase of wealth. But in the case of the honey it will be quite different. An increase in the honey crop will not mean a decrease in any other crop, but as before said, will be a clean-cut addition to the total resources. Indeed, it will be more than the addition of the honey crop, for according to good authorities, honey is only a by-product of the bee, its chief use being the fertilization of flowers. The value of the beeswax produced is also an item worth considering.

It seems, then, pretty clear that the neglect of the bee-keeping interests does not arise from the fact that the products are too insignificant to warrant any outlay for experiments.

The second ground on which the neglect might seem to be justified, is the fact, if it be a fact, that everything pertaining to bee-keeping is already so fully understood that there is no room for experiment. The very suggestion of such a thing will bring a smile to the lips of any practical bee-keeper. If there is any set of men that are exceptionally noted to be always on the strain in the investigation of some unsettled point, lying awake nights over some unfinished problem, losing every year considerable parts of the crop in seeking some better way, surely they may be found among bee-keepers. It is idle to pursue further such a thought.

What, then, is the reason that so far nearly all that has been done has been a matter entirely of private enterprise?

Is it not because those who have in charge such matters have not been fully awake to the importance to the public interests of bee-keeping, and that bee-keepers have been too modest to assert their claims?

In view, then, of the importance of an industry that adds to the general wealth in a double way without detracting from anything else, and in view of the fact that bee-keepers are largely engaged everywhere in experiments that could be more economically and more satisfactorily carried out at a place fully equipped for the purpose, there seems only one answer to the question whether bee-keepers need an experiment station.

As to the details of carrying out anything of the kind, I will make no suggestion except the single one, that whoever is at the head of such an experimental station should be a bee-keeper through and through—one in touch with the mass of bee-keepers, knowing their needs and in entire sympathy at all points with the work. To such a one they will look hopefully for light, and cheerfully render all the aid in their power.

DR. C. C. MILLER.

Marengo, Ill.

The essay was discussed, but no further action was taken than that taken at the Chicago meeting in October.

The committee on code of rules and standards for grading apiarian exhibits at fairs, made their report, but the final action on the same was deferred until the meeting at Springfield, next year.

Code of Rules and Standards for Grading Apiarian Exhibits at Fairs.

COMB HONEY.

Rule 1. Comb honey should be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

Rule 2. Points of quality should be:

Variety	5
Clearness of capping.....	10
Completeness of capping.....	5
Completeness of filling.....	5
Straightness of comb	5
Uniformity	5
Style of section	5

Remarks, 1. By variety, is meant different kinds, with regard to the sources from which the honey is gathered, which adds much interest to an exhibit.

2. By clearness of capping, is meant freedom from travel stain and a water soaked appearance. This point is marked a little high because it is a most important one. There is no better test of the quality of comb honey than the appearance of the cappings. If honey is taken off at the proper time and cared for as it should be, so as to preserve its original clear color, body and flavor will take care of themselves, for excellence in the last two points always accompanies excellence in the first. Clover and basswood honey should be white; heartsease, a dull white tinged with yellow; and Spanish needle, a bright yellow.

3. By uniformity, is meant closeness of resemblance in the sections composing the exhibit.

4. By style, is meant neatness of the sections, freedom from propolis, etc. Under this head may also be considered size of the section. The $4\frac{1}{4} \times 4\frac{1}{4}$ being the standard, should take the preference over all others, and $1\frac{7}{8}$ to 2 inch in width over narrow ones.

5. Honey so arranged as to show every section should score the highest in style of display, and everything that may add to the tastiness and attractiveness of an exhibit should be considered.

EXTRACTED HONEY.

Rule 1. Extracted honey should be marked on a scale of 100, as follows:

Quantity	40
Quality	45
Style of display	15

Rule 2. The points of quality should be:

Variety	10
Clearness of color	5
Body	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

Remarks, 1. Light clover honey pouring out of a vessel is a very light straw color; Spanish needle, a golden hue; and dark clover honey a dull amber.

2. Style of package is rated a little high, not only because in that consists the principal beauty of an exhibit of extracted honey, but also because it involves the best package for marketing. We want to show honey in the best shape for the retail trade, and that in this case means the most attractive style for exhibition. Glass packages should be given the preference over tin; flint glass over green; and smaller vessels over larger, provided the latter run over one or two pounds.

3. By variety of package, is meant chiefly different sizes; but small pails for retailing, and in addition, cans or kegs (not too large) for wholesaling, may be considered. In the former case, pails painted in assorted colors and lettered "Pure Honey," should be given the preference.

4. By finish is meant capping, labeling, etc.

5. Less depends upon the manner of arranging an exhibit of extracted than of comb honey, and for that reason, as well as to give a higher number of points to style of package, a smaller scale is allowed for style of display.

 SAMPLES OF COMB AND EXTRACTED HONEY.

Rule 1. Single cases of comb honey, entered as such for separate premiums, should be judged by substantially the same rules as those given for a display of comb honey, and samples of extracted by those governing displays of extracted honey,

Rule 2. Samples of comb or extracted honey as above, may be considered as part of the general display in their respective departments.

GRANULATED HONEY.

Rule 1. Candied or granulated honey should be judged by the rules for extracted honey, except as below.

Rule 2. The points of quality should be:

Variety	10
Fineness of grain.....	5
Color.....	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

Rule 3. An exhibit of granulated honey may be entered or considered as part of a display of extracted honey.

NUCLEI OF BEES.

Rule. Bees in observation hives should be marked on a scale of 100, as follows:

Color and markings	30
Size of bees.....	30
Brood.....	10
Queen	10
Quietness	5
Style of comb.....	5
Style of hive.....	10

Remarks, 1. Bees should be exhibited only in the form of single frame nuclei, in hives or cages with glass sides.

2. Italian bees should show three or more bands ranging from leather color to golden or light yellow.

3. The markings of other races should be those claimed for those races in their purity.

4. A nucleus from which the queen is omitted should score zero on that point.

5. The largest quantity of brood in all stages or nearest to that should score the highest in that respect.

6. The straightest, smoothest and most complete comb, with the most honey consistent with the most brood, should score the highest in that respect.

7. That hive which is neatest and best made and shows the bees, etc., to the best advantage, should score the highest.

QUEEN BEES.

Rule. Queen bees in cages should be marked on a scale of 100, as follows:

Quantity	40
Quality and variety	40
Style of caging and display	20

Remarks, 1. The best in quality consistent with variety should score the highest. A preponderance of Italian queens should outweigh a preponderance of black ones, or perhaps of any other race or strain; but sample queens of any or all varieties should be duly considered. Under the head of quality should also be considered the attendant bees. There should be about a dozen with each queen.

2. Neatness and finish of cages should receive due consideration, but the principal points in style are to make and arrange the cages so as to show the inmates to the best advantage.

BEESWAX.

Rule. Beeswax should be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

Remarks, 1. Pale clear yellow specimens should score the highest, and the darker grades should come next in order.

2. By style, is meant chiefly the forms in which the wax is molded and put up for exhibition. Thin cakes or small pieces are more desirable in the retail trade than larger ones. Some attention may be given to novelty and variety.

APIARIAN IMPLEMENTS AND SUPPLIES.

Rule. An exhibit of minor apiarian devices, etc., should consist of such as the following, with the accompanying scale of points for each:

Smoker	10
Honey knife ..	10
Foundation fastener	10
Bee escape and board	10
Veil	10
Swarming or hiving device.....	10
Feeder, large.....	10
Feeder, small.....	5
Queen cage	5
Queen and drone trap.....	5
Queen cell protector.....	5
Foundation roller.....	5
Wire embedder.....	5
Sample of sections	5
Brood foundation.....	5
Surplus foundation	5
Cage for shipping bees.....	5
Wired frame with foundation.....	5
Wax extractor.....	10

Remarks, 1. The following may be added if desired and they are not otherwise provided for:

Honey extractor.....	30
Hive and furniture.....	20
Super and furniture.....	10
Shipping case.....	5
Honey board.....	5

2. When there are a variety of articles of any one kind, each specimen should be scored according to merit.

3. Some attention should be paid to style both of individual articles and the display; but the principal points to be considered are utility and value.

GENERAL RULE FOR SCORING.

In all departments and under each several head, the best or leading specimen or exhibit should be taken as a basis and scored the highest allowed such specimen or exhibit, and all others be marked in proportion.

Remarks: Specimens of equal grade should be scored equally. It is not likely that any two exhibits will rank equally on all points or in the aggregate.

GEO. F. ROBBINS,
D. D. COOPER.

A resolution of greeting was voted unanimously, as follows:

ILLINOIS STATE BEE-KEEPERS' ASS'N,
SPRINGFIELD, ILL., Dec. 15, 1892.

Resolved, That we extend our congratulations to our friends and brother farmers of the State Grange, now in session in this building, wishing them and their organization success and prosperity; and that a copy of this resolution be sent to them at once.

Resolutions were offered by Mr. Dadant, and adopted, as follows:

Resolved, That we extend our hearty thanks to our President, Hon. J. M. Hambaugh, for his successful efforts in

securing the annual appropriation from the Legislature for our industry; and also for his unsuccessful attempt at securing recognition from the Illinois Commission at the World's Columbian Fair and Exposition; and,

Resolved, That we also extend to our worthy Secretary, Jas. A. Stone, our thanks for his efficient and valuable report for the year 1891, and for all his work in behalf of the Association; and that we instruct the Treasurer to pay into his hands the sum of \$25 out of the membership funds of the Association, regretting that the sum may not be larger at present.

On motion by A. N. Draper, it was voted that the \$20 paid W. Z. Hutchinson for reporting the Chicago meeting, be taken from the State appropriation; this was amended by taking it from the appropriation for next year.

A discussion followed on the "Code of Rules and Standards for Judging Apiarian Exhibits at Fairs," and on-motion of Mr. Finch, the report of the committee on the same be ordered printed in our next report, and not acted upon until next year.

In the discussion on Dr. Miller's essay, Mr. Draper thought we needed no experimental station. Mr. Dadant said it was very evident that we had never received any benefit from an experimental station, and that we never would unless it be in the hands of a good bee-keeper.

Greetings from the Illinois State Grange, in session at the State House, Springfield, Dec. 15, 1892:

JAMES A. STONE, *Sec'y Illinois State B.-K. Ass'n*:

Dear Sir—The friendly message of your Association to the State Grange has been received and presented, and I am directed to respond, thanking you and your associates for the courtesy extended. We are all co-workers on the farm, and in the various interests of agricultural affairs, and it is meet that we give each other the right hand of fellowship and good-will in the common cause.

Trusting that your meeting is pleasant and profitable, and will be crowned with success, I am

Very truly and fraternally yours,

THOMAS KEADY, *Secretary.*

The above message was read, received and ordered printed in our report.

The committee on legislative measures reported, and on motion their report was read and adopted by sections, as follows:

Your committee recommend that it is advisable to secure the following bills from the Legislature:

1. A bill to 'prevent the spraying of fruit-bearing trees, shrubs, vines or plants with poisonous compounds during bloom.

2. A bill to compel adulterators to label all mixtures of extracted honey with the true name of their components, whether sugar, glucose, or other sweets not gathered from the flowers.

We believe that all mixtures that are not entirely pure extracted honey, as gathered from their natural source by the bees, should be so marked, and labeled with the name of the manufacturer.

3. A bill to continue the appropriation to the State Bee-Keepers' Association for the publishing of its report.

4. We also recommend the election of a committee, to be composed of Messrs. J. M. Hambaugh, S. N. Black and J. A. Stone, as a standing legislative committee, to pursue the aim of securing the above mentioned legislation.

C. P. DADANT, J. A. STONE,
CHAS. BECKER, G. E. ROBBINS,
GEO. POINDEXTER,

Committee.

The Convention then adjourned until 1:30 p. m.

AFTERNOON SESSION.

The Convention met at 1:30 p. m., with President Ham-
baugh in the chair.

An essay was read by Mr. C. P. Dadant, on

"Why Farmers and Horticulturists Should be Bee-Keepers."

In order to succeed in apiculture, it is not altogether necessary to be a specialist, and a farmer can keep a few hives of bees as well as he can successfully grow a small orchard or cultivate a truck-garden. The fact is, we usually find that the most successful farmers do not neglect any of the smaller branches of their industry, though some are more proficient in one line than in another.

The greatest draw-back to the keeping of bees by farmers, horticulturists, and country people in general, is the fear of stings. The majority of them imagine that the handling of bees is a difficult feat, and can only be performed by those who have a special gift in that direction. The recent progress in the management and handling of bees is unknown to the masses. Yet it is a fact that with all the latest improvements at our command—improved bee-smokers, bee-veils, movable frames, and the latest implement, the bee-escape—there is so little danger of being stung that it takes only a little determination to successfully handle a limited number of colonies.

Instead of saying, Why should farmers keep bees, we ought to say, Why should they not keep bees? There is probably not one farmer's family in fifty that get all the honey they can consume, and on every farm there are thousands of pounds of honey going to waste annually for want of bees to harvest it. Ten colonies of bees and an outlay of implements not exceeding \$25, with ordinary management, will be sufficient to gather all the honey a family can consume. According to our own experience, the product of 10

colonies of bees in this State is, on an average, 50 pounds each annually.

Very little time is required for the manipulations of this number of hives. With large hives and the extracting method, the actual labor is reduced to a few hours. When the bees have been properly put into winter quarters, they need no attention till the first days of March. Then one short visit, each month during the spring, to ascertain whether they have queens, and whether the stores are sufficient to permit them to rear brood plentifully, and they will be safely carried to the time of harvest.

With extracting supers, the job of putting on the honey-boxes is a matter of less than an hour. Then the extraction of the crop will require perhaps a half day. The rest of the manipulation, including putting the hives in proper shape for winter, need not require more than a couple of hours at every visit.

The labor is indeed very light. To know what is wanted, and to do it in time, is the secret of success. To this we might add that the bee-business is a business of details, and that he who succeeds best is he who studies it most, and does not rely more on his own ideas than on the advice of experienced writers. More blunders have been made by ignorance, or by too much self-reliance, in this business, than in any branch of farming that I know of.

It is perhaps well to add that the bees are a useful factor in the fertilization of many blossoms. Their help is invaluable to the horticulturist, and it is a known fact to all observers that the season in which the fruit-trees bear the most plentiful harvest, are those in which the bees have worked on them with the most diligence. The fact is easily explained, and is in accordance with what the naturalists tell us of the structure of the blossoms, and of the fertilization of the pistils. To fertilize the flowers and make them bear fruit it is necessary that a little of the pollen be scattered on the pistil, and it is proven that this pollen is more efficient when not furnished by the same blossom or even by

the same tree. So the bee is a natural agent in the reproduction of many trees and plants, and prevents in-and-in breeding from being carried to excess in all the blossoms on which it works.

The assertion of many people, that the bees are injurious to sound fruit is a gross error, and if more people kept bees they would soon ascertain that the bees feed on fruit only when it is already damaged, and when no other and better sweet is to be found. They aim to save that which goes to waste, but always save the best first.

The location of an apiary, on a farm, is an easily solved problem. There is always some corner, in which stock does not go, sheltered by trees or orchard, or along some hedge, and on every farm this corner might as well be occupied by bees as by weeds; and if a season comes when the corn-field or the stubble are overrun by weeds, owing to too much rain or other unfavorable circumstances, the farmer may rejoice in the fact that these same weeds will increase his honey-crop.

Mr. A. N. Draper read an essay on "The Adulteration of Honey," which on motion, was ordered sent to Mr. Ernest Root, to be read at the meeting of the North American at Washington; and that our meeting earnestly protest against the sale of sugar syrup fed to bees and sold under the name of "honey."

The election of officers for 1893 resulted as follows:

President—Hon. J. M. Hambaugh, of Spring.

Vice Presidents—1st, J. Q. Smith, of Lincoln; 2d, Mrs. L. Harrison, Peoria; 3d, Peter Miller, of Belleville; 4th, Geo. Poindexter, of Kenney; and 5th, C. P. Dadant, of Hamilton.

Secretary—James A. Stone, of Bradfordton.

Treasurer—A. N. Draper, of Upper Alton.

On motion, the executive committee was instructed to place the next State appropriation in the hands of the Treasurer.

The Convention then adjourned *sine die*.

REPORT
OF THE
Illinois State Bee-Keepers' Association.

THIRD ANNUAL MEETING,
SPRINGFIELD, ILLINOIS.

The Illinois State Bee-Keepers' Association met in the State House, at Springfield on December 12 and 13, 1893.

The meeting was called to order by President J. M. Ham-
baugh, at 11 a. m., and opened with prayer by Rev. A. H.
Bates.

An address of welcome was made by Col. Chas. F. Mills,
as follows:

ADDRESS OF WELCOME.

Mr. President and Members of the Illinois Bee-Keepers' Association:

The very pleasant duty has been assigned me of extending a cordial welcome to all in attendance at the annual meeting of the Illinois Bee-Keepers' Association.

Your organization during the past year has had an excellent opportunity for demonstrating the necessity of a society having for its object the advancement of an industry in which all of the agricultural classes of the State are deeply interested.

The very creditable exhibit made by the officers of this Association, of the apiary industry of Illinois, at the World's Columbian Exposition, widely advertised the grand possibility for increasing the wealth of the State through the agency of the bee-keepers and farmers residing in the floral pastures of Illinois.

The Illinois exhibit of honey and apiary products and appliances at the World's Columbian Exposition, was larger than that of any State exhibit, and the quality, artistic arrangement and management was not surpassed by that of any similar display.

You will pardon me for making a personal reference to the splendid services rendered by your worthy President and Secretary, in connection with the arrangement and care of the exhibit made at the World's Fair of the apiary products of the State.

It was my privilege for months to daily pass the exhibit made by your Association at the World's Fair, and to note the interest manifested in the same by the general public.

The thousands of interested spectators that daily examined the display made by your officers, without exception expressed their unqualified admiration of the complete and artistic exhibit made by President Hambaugh and Secretary Stone.

The Illinois Bee-Keepers' Association rendered an important service to the State, in connection with the Columbian Exhibit, that will ensure your membership the praise and gratitude of every public-spirited citizen interested in the development of this large and important industry.

The sacrifice of time and labor made by this Association, in connection with the Columbian exhibit not only entitle the organization to the thanks of the State, but should insure you liberal appropriations for your good work from each succeeding General Assembly.

It is a great pleasure to meet the earnest men gathered together at this meeting for the purpose of advancing the in-

dustry you so faithfully and creditably represent, and on behalf of the Capital Bee-Keepers' Association and the citizens of Springfield, I most cordially welcome you to the city on the occasion of your annual meeting.

Mr. Mills' address was responded to by Mr. N. S. Black, as follows:

RESPONSE.

Mr. President and Members of the Illinois State Bee-Keepers' Association:

I am called upon, very unexpectedly, to respond to the hearty welcome tendered us by Col. Mills. Persons are chosen to fill places like this for two reasons. The first is, because they *can* talk; the second, because they *can't*. I think I was chosen for the latter reason, and will try to govern myself accordingly. But, in the name and in behalf of this Association, I accept the hearty welcome tendered us by Col. Mills. First, because of the nice things he says of us, which he says so nicely; second, because we want to be welcomed and to feel welcome to come here to enjoy the pleasure of meeting familiar faces, old friends, and making new friends; to tell what we have learned the past year; about the big honey yields (some of us did not get any), so perhaps the less said about that the better.

After seeing the honey display at the World's Fair I think we may feel that we are entitled to some recognition from the people of the State; for all who know anything about it know there would have been no honey display but for the strenuous efforts of this society, and all who saw the display agree that it was an exhibit to be proud of.

Now let us work together in the future, as in the past, and build up our society, that we may always feel that we are doing good in the cause of apiculture; then we may be always sure of as hearty a welcome as we have the pleasure of accepting to-day.

On motion of the Secretary, Rev. A. H. Bates and Col. Chas. F. Mills were elected honorary members of the Association.

Minutes of last meeting were read and approved.

The President announced at this point that a recess would be taken and membership fees received.

The Convention then adjourned until 1:30 p. m., at which time the meeting was again called to order by President Hambaugh.

The President's address was first in order, and was attentively listened to because of its merits.

PRESIDENT'S ADDRESS.

Brother Bee-Keepers:

Another year has glided down the scroll of time, with its many shifting scenes of life, since our annual meeting of one year ago. To many of us it has been a year of wondrous and sublime experience, and will be treasured up in our memories so long as life lasts.

Many will treasure its memory for the joys and sublime happiness it has given, while others will have occasion to reflect upon it for its sorrows.

When I parted with you one year ago, little did I realize the pall of gloom hovering o'er our household, and the solemn ordeal in waiting. Christmas came, but its joys were turned to mourning. The little stockings were not hung to the curtain, and the joyous, merry prattle of the children were turned to sobs and moans, for, concealed beneath a shroud on that memorable Christmas eve, lay one cold in death's embrace. Yes, friends, I know I have your condolence and sympathy when I tell you that we buried the most endearing and sacred of all earthly beings on last Christmas day—*my mother*. The eternal spirit had spoken and we must obey, and obedient to God's eternal laws, let us not forget our mortality, and the frailty of all things earthly.

I presume you will remember that during the session of this Association of one year ago, there was a resolution passed by this body unanimously, that in consequence of our failure

to secure any funds whereby to make an appropriate exhibit at the World's Columbian Exposition, that the Illinois State Bee-Keepers would not participate in that exhibit; but a legislative committee was appointed, which, as you are aware, by the joint and co-operative assistance of the officers of the Horticultural and Dairymen's associations, succeeded in working a bill through the 38th General Assembly allotting us the sum of \$3,500, to be used in making a suitable exhibit of the apian resources of the State of Illinois, and by the provisions of the bill, as in the other named societies, it put the entire management in the hands of the executive committee. When your legislative committee again donned the war-paint and took up the cudgel for recognition before our honorable lawmakers, it was with no small degree of doubt and misgiving, considering the rebuffs and misfortunes previously experienced, but as there were three other societies swimming in the same boat, that could not receive recognition from our honorable State Board of Agriculture, we concluded we could afford to sink or swim, at the dictation of the 38th General Assembly along with our sister industries mentioned.

You are aware the funds allotted to us were granted out of the old original appropriation of \$800,000 that passed the 37th General Assembly; and the almost unanimous vote given this joint bill by both branches of the Legislature, is most gratifying, and is a high compliment to the industries that were stricken from the category and stranded high and dry from participating in the World's Columbian Exposition. It was snatching victory from defeat, and notwithstanding the extreme lateness of the hour that the bill became a law, it gave rise to more feelings of emotion than I had experienced in a whole decade of my life. Knowing as I did that the intent and import of the appropriation of the 37th General Assembly was that all industries should receive proper recognition, and the amount being ample, there could be no shadow of an excuse on the part of the custodian of that fund for excluding any legitimate industry of the State, which was made manifest by the vote granted the joint bill embracing the prominent industries

mentioned, and can be construed as a rebuke to them for their perfidy and meanness.

You have been made familiar with my labors and struggles to secure funds from the old appropriation through the State Board of Agriculture, with my failures, etc. When our success was assured, there was no other alternative but to at once secure the reins and make the best we could from the extreme late deal given us, it being then in June, and by the time circulars could be issued and notices given to the press, the clover harvest was upon us, and the idea of securing appropriate designs, etc., were, in a manner, abandoned. But you are doubtless familiar with our effort, and know whether or not it has reflected credit to the Illinois State Bee-Keepers, and further comment from me would be inappropriate.

We were a little behind some of our sister States in getting our exhibits mounted, but as our entire exhibit had to be made up from this years' crop of honey, you can readily understand that we were by no means idle, considering the magnitude of the exhibit, and the difficulties that beset us in every direction. These difficulties can never be understood save by Bro. Stone and myself, or by parties who were compelled to go through the mill of tedious red tape and dilatoriness of railroad and Columbian Fair officials. We will not dwell any longer upon this topic, only to remind you that, notwithstanding the gloomy forboding and outlook of one year ago, when this Association adjourned, the Illinois State Bee-Keepers were represented at the fair and their industry was recognized, and by the display of their product, their fame has spread to the remotest parts of the earth, and we believe there was not a bee-keeper in the State of Illinois but appreciated our efforts in behalf of the State and apiculture; but while we have reason to rejoice over our success in this direction, we are sorry to state that the appropriation of the \$500 for publishing our "Report" was denied us. It was triumphant in the house but lost in the senate, and we look upon this as quite unfortunate, and we trust will be restored back

again to us two years hence; but, brother bee-keepers, it will not be without an effort on your part. Be vigilant and lose no opportunity to gain a point in this direction. In the meantime let us do what we can to dispel the prejudice that prevails in the public mind as regards all honey in liquid form being adulterated. It seems that there is a prevalent opinion that bee-keepers have no right to make the margin on prices so wide between comb and extracted honey; that there is a gross wrong some where; that the prices on comb honey are entirely too high, or the honey in extracted form is adulterated to the extent that makes the wide difference in the price, they not understanding the difference in the cost of the production of the two articles. This can only be done by educating the people to these important facts, and letting them know that honey is as pure out of the comb as in it, and that the bee-keepers, as a class, stand too much upon honor to practice so gross an outrage upon the public as adulteration. Learn the people to deal direct with the producer as near as possible, and to deal only with those houses that are able to give a sworn statement as to the purity of the goods they handle.

The avocation of honey production has not been very lucrative to the producer the past two or three years in the State of Illinois, but we entertain hopes for the future, and trust another year we will be able to report a bountiful harvest.

The Secretary's and Treasurer's reports were read and approved.

SECRETARY'S REPORT.

Mr. President, Ladies and Gentlemen:

Since our last meeting, one year ago, many are the changes that have taken place, though, so far as we have heard, death has not taken away any of our members. But the good Lord has permitted a number of us to gather again for mutual greeting in this almost finished Columbian year. Our meeting for Chicago this year was postponed on account

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of the North American meeting in that place, and in order to swell our membership to its usual number, extra efforts will need to be made to overcome the loss occasioned by the setting aside of our Chicago meeting.

The meeting of the North American at Chicago, in October, was the largest convention of bee-keepers ever held on this continent, and an enjoyable occasion never to be forgotten; the report of which see in this report. Though, after such a meeting, it will require redoubled energy to prevent meetings of less magnitude from dwindling, and especially in sections of the country that are compelled to record another poor honey year.

The northern portion of this State, this year, had an abundant flow of white clover honey, as well as the region of country in other States adjacent to the north part of this State.

When we think of the number of poor honey years we have recently passed through, we are reminded of the neighbor who laughed at us for planting out so many peach trees. He said peaches would never do any good here any more. But we said if we ever had a peach year again we, who had the trees, would get the peaches. Now we have had six or seven years of peaches, and about the third year our laughing neighbor began to set out trees in the hope of getting peaches.

When the good honey years do come, those who have the bees will get the honey, and although we do not make fortunes out of our honey, we have the pleasure which comes from nice honey enough for our family and friends who will visit us, and some to spare for market.

When we failed to get our appropriation to publish our report for the two years between the meetings of the Legislature, we resolved to extend the time of our forthcoming report into the first of next year—1894. We also resolved to have enough copies of the report bound in cloth to furnish one to each of those who became members of the Association, by the payment of one dollar membership fee for the year, and in paper for others so far as appropriation would reach.

As you have seen in the October 12th number of the A. B. J., we had electrotypes of the Illinois Honey Exhibit at the World's Fair, which are the property of this Association, and will go into our next report, when some of the mistakes that have been published will be disputed, whether they are ever corrected or not.

Before the Illinois honey exhibit was in place (on account of the lateness in obtaining the appropriation) New York made its boast that it had three times as much honey on exhibition as all the other States combined. We still see the statement, in some of the bee journals, that New York had the largest exhibit, which was not the case. The truth is, New York had its comb honey all in shipping cases, with only the sections next to the glass filled, the remainder of the case being empty, so that it was an easy matter to estimate the exact number of pounds they had, which was 2,924 pounds of comb honey, while Illinois had 5,523, actual count in both cases. But after we had made this estimate we learned by proof that a few of their shipping cases, in their smallest show-case, were filled solidly, and this would add to their number of pounds of comb honey 80 more shipping cases containing 12 pounds each, in which we have already counted 3 pounds in each, leaves it standing thus: $80 \times 9 = 720$ pounds; which, added to 2,924, makes a total for New York of 3,644, against 5,523 for Illinois.

We would have said nothing of this had we not seen that the error is still being quoted in prominent bee journals. We were not alone in making this reckoning; when New York made its boast we were going to make a sure thing of it. New York did have a fine lot of honey, as well as some of the other States, and made it appear to the best advantage by showing it in cases that hid the defects at the edges of the sections, though the judging was fairly done, as it was inspected closely in judging.

We observed while at the fair, in making a trip into the country some eighty miles west of Chicago to Lee county, a great amount of sweet clover, and that the honey we

purchase from that neighborhood had a taste similar to the smell of sweet clover. We were convinced that it was a valuable honey plant when we saw 2,300 pounds of comb honey and three barrels of extracted from thirty-five colonies of bees.

We will conclude by saying that if we have had a poor year in our part of the State, it has been rich in the north part, and it is evident that with more alsike and sweet clover we would have better and more general harvests of honey.

JAS. A. STONE.

The committee on legislative bills reported, which report was adopted and the committee discharged.

REPORT OF LEGISLATIVE COMMITTEE.

SPRINGFIELD, ILL., December, 1893.

Your Legislative Committee beg leave to report, as follows:

In accord with the voice of this Association, we labored incessantly, with the last legislative body that met in this house, for the passage of the bills you recommended, viz:

A bill to prevent the poisonous spraying of fruit trees and shrubs while in bloom.

A bill to prevent the adulteration of honey.

A bill to continue the appropriation for the publication of the report of the Illinois State Bee-Keepers' Association.

The bill for the prevention of poisonous spraying of trees while in bloom, was presented in the House by W. S. Smith, of Macon (H. B. 598), and though our visits to him were frequent, we could not learn the position of the bill. We suppose he was not friendly to it and did not work it as he should, and when brought up it was tabled, on the 18th day of April.

The bill to prevent the adulteration of honey was placed in the hands of Senator B. F. Caldwell, of Sangamon, and at the same time, in the House, was presented by Dr. Whitley,

of Sangamon. By April 12th Senator Caldwell had his bill through the Senate and reported to the House. Instead of Mr. Whitley, at this point, substituting the Senate bill for his House bill, and getting it through, he lay quietly on his oars till his cry was, "It is too late;" "there are more bills on third reading than we will get through;" and so let this bill die in the committee on sanitary affairs.

The bill for the continuation of our appropriation to publish the bee-keepers' report was introduced in the Senate by Senator Humphrey, of Cook county, who fought well and hard for it; but in spite of himself and its other friends, the bill was tabled on the 1st day of March.

The same bill was introduced in the House by Mitchell Dazey, of Adams county, who worked hard for it, and before it was gotten through the House Joseph E. Miller, of St. Clair county (brother of our 3d Vice-President), vounteered his services in working for the bill, and it was worked through by a hard pull, and was reported to the Senate. Here again its enemies were ready for it. When it was brought up for second reading the enacting clause was stricken out, and so defeated. But our friends, Humphrey, Dunlap and others compelled them to go on record, and their names and the way they voted will appear in our report when published.

ABSTRACT OF HOUSE RECORD.

Mr. Higbee asked unanimous consent to take up House Bill No. 668, on second reading.

Unanimous consent was given.

Whereupon the bill, House Bill No. 668, a bill for "An Act making an appropriation in aid of the Illinois Bee-Keepers' Association,"

Was taken up and read at large a second time.

Mr. Johnson moved to strike out the enacting clause of the bill.

The yeas and nays being demanded, the roll was called, and the motion prevailed by the following vote: Yeas, 24; nays, 17.

Those voting in the affirmative are Messrs. Allen, Arnold, Barnes, Bartling, Caldwell, Campbell, Coppinger, Craig, Ford, Green, Higbee, Johnson, Leeper, Manecke, Noonan, O'Connor, O'Malley, Reavill, Solomon, Seibert, Thiele, Wall, Wells, Wright—yeas, 24.

Those voting in the negative are Messrs. Anderson, Aspinwall, Bacon, Bass, Chapman, Coon, Crawford, Dunlap, Evans, Howell, Humphrey, Hunt, Hunter, Knopf, Letourneau, Mussett, Zearing—nays, 17.

And the Secretary was ordered to inform the House thereof.

When our last December meeting was in session our hopes of an appropriation for a World's Fair exhibit had all fled to the four winds. But when we began to consult with the horticulturists and dairymen they began to revive, and when the Legislature had been approached from all the points that could be found in any way approachable, and when our committees had repeated their visits during nearly the whole session, and failed to get an appropriation, it began to be evident that we were going to succeed only in getting what we had first asked and pleaded for from the State Board—a portion of the \$800,000 appropriated by the preceding Legislature—of which the bee-keepers received \$3,500, and so were enabled to make what we think was a creditable apiarian display.

Signed, J. M. HAMBAUGH,
S. N. BLACK,
JAS. A. STONE,
Committee.

The discussion on the Code of Rules for Fairs (see pages 80-86), was taken up, and on motion, action on the same was again postponed until it should come out in print in our forthcoming report.

An essay was read by Geo. F. Robbins on "The Rights and duties of the Illinois State Bee-Keepers' Association:

"The Rights and Duties of the Illinois State Bee-Keepers' Association."

That we have duties to perform I presume will be questioned by no one. That we have rights to demand may not be so obvious, but I believe it is none the less true. To whom do we owe duty or service? From whom may we reasonably expect the same? The answers to both questions are intimated in the second Article of our Constitution, viz: "Its object shall be to promote the general interests of the pursuit of bee culture." The phrase, "within the State," should be added. We are an Association organized under the laws of the State to promote the interests of bee culture in the State. We owe it to our industry, to those who follow the pursuit, to the commonwealth, in short, to whose material prosperity bee-culture must contribute a much larger share in the future than it has done in the past—to study their wants and labor for their benefit. And when we come to consider our duties in detail we will find, in almost every case, a corresponding need on our part—a something that we need to ask at the hands of the State. There are mutual obligations between this Association and the commonwealth. Now what are those corresponding rights and duties?

One of our most especial duties is to present and urge the claims of bee-culture upon our public servants—the State Assembly and the Board of Agriculture. As a body we can do a [work in that line that can be done in no other way. But for the existence of this organization Illinois would have had no apiarian exhibit at the World's Fair. We achieved a triumph in that case, but more permanent and valuable work yet remains to be done.

We should labor, first, to secure an apiarian experiment station. This is a matter that we should not let rest. It is our right and duty to demand this at the hands of the State—aye, and to name the man who is to conduct it, too. Much as such a thing is needed, there is danger that it would be of little value after it is established. The only sure way to run such a station successfully is under the eye—perhaps I should say advice—of this Association.

It is our duty as a body to gather and disseminate throughout the State information pertaining to bee-culture. This can be best done by means of annual reports, which shall embody the best we can gather up, and be published for free distribution. To do that we must have the help of the State. To ask such aid is a reasonable request. It is simply praying the State to look after its own interests, by fostering one of its own promising and progressive industries.

We should see that the pursuit of bee-culture is properly represented at fairs. I believe a circular should be issued to all fairs within the State, containing the premium list adopted at the convention two years ago, and a request that they take that schedule as a basis and appropriate as near the amount therein specified as possible. But it is chiefly with the State Fair, of course, that we have to deal. Mrs. Harrison said, at the convention two years ago, that when she complained of the meagre sums appropriated for premiums for an apiarian exhibit, to some members of the Board of Agriculture, she was told that it was the fault of bee-keepers themselves; that they should go before the board and make their wants known. Let us note that and act accordingly. A better schedule of premiums should be offered than they have ever offered yet, and suitable accommodations should be furnished for an apiarian exhibit. We should claim for our pursuit better recognition at the hands of the board, and it is the duty of this Association to urge that claim.

During our brief existence as an organization we have done some hard fighting, though not with uniform success. We have been worsted in some encounters. But our experience in one case, at least, has been much like that of Bonaparte at Marengo. At three o'clock on that memorable day his army had been driven from every position it had occupied in the morning; his brigades were scattered and routed. When at that hour Gen. Desaix arrived with a small reinforcement, and his superior asked him what he thought of the battle, he said: "I think it is lost, sir; but there is

yet time to win another." "So I think," said the First Consul. New orders were issued, new onslaughts made and the outcome was scored as one of Napoleon's greatest victories. So in the matter of the World's Fair exhibit. We lost one battle only to go to work almost the last hour in the day and win another on the same ground. Of course we do not forget the credit due our leaders in this case; but they, with all their efforts, could not have succeeded except as representatives of the State Bee-Keepers' Association.

We will have some hard fighting to do in the future. Ours is an infant industry, little known and understood. We may be often repulsed, but we must simply return to the charge again and again, if need be, remembering that "eternal vigilance is the price of success," and that "labor brings its own reward."

Mr. Becker spoke to quite a length, and thought that by some mode of procedure we should adopt some way of finding out the condition of our neighbors' bees as compared with our own, at intervals during the working season.

On motion of Geo. F. Robbins, a committee of three was appointed to consider, 1st, What should we ask of the General Assembly and State Board of Agriculture? and 2d, How to get these claims properly represented to those bodies. G. F. Robbins, J. Q. Smith and S. N. Black, were appointed as said committee.

BEES AND GRAPES.

Mr. Becker asked why bees did not work on grapes last year.

Mr. Dadant answered, because the dry weather did not cause the grapes to crack, and added that he had starved bees to death on grapes, and had, on one occasion, pricked a pin-hole in a grape, and it was the only one on the whole bunch that was touched, and that only as far as they could reach.

Mr. Riehl, of Alton, said that bees could not injure sound grapes or fruit, except over-ripe raspberries.

Mr. Vandenburg said that bees cannot puncture grapes; he was sure of that.

A committee on resolutions was appointed, composed of Messrs. Black, Smith and Stone.

A committee was also appointed, composed of Messrs. Hambaugh, Poindexter and Draper, to formulate plans by which a member's honey can be put before the public as pure.

A motion prevailed, that a committee on census be appointed, to decide the best plan of finding out the monthly condition of the bees of the members of the Association. Messrs. Becker, Smith and Dadant were made such committee.

A committee on congressional legislation was appointed, composed of Messrs. Dadant, Draper and Poindexter.

The Convention then adjourned until 8 a. m., the next day, and it was recommended that the members attend the meeting of the Horticultural Society in the evening.

SECOND DAY.

At 8 o'clock a. m., on Dec. 13th, the meeting was called to order, with President Hambaugh in the chair.

The congressional committee reported a resolution, which was unanimously adopted, petitioning Congress to make and enforce laws compelling those who adulterate honey to name it with its true name, as follows:

To the Honorable, the Senate and the House of Representatives of the United States:

The Illinois State Bee-Keepers' Association, in meeting assembled, by unanimous vote petition your honorable bodies to make and enforce laws forbidding the sale of any article under the name of honey unless it be the natural product of

flowers and plants, naturally gathered by the bees from the plants themselves, and marked with the name and address of the bee-keeper.

Your petitioners further beg leave to state that the Conger Pure Food bill, as presented at the last session, is in accord with the wishes of this Association.

C. P. DADANT,

A. N. DRAPER,

GEO. POINDEXTER,

Committee.

Your committee recommends that this Association should, for the benefit of bee-culture, petition the State Board of Commissioners of Illinois University, at Champaign—

First—To appropriate \$500 of the \$15,000 granted to the State by the general government for conducting experiments in agriculture, to pay salary and expenses of an Apiarian experiment station, and to couple with that petition a request that the person recommended by the State Association be appointed to conduct those experiments.

Second—To adopt the premium schedule recommended by the State Association at its annual meeting of December, 1891, and to erect a suitable building for apiarian exhibits.

We also recommend that a committee be appointed to present these matters to the board, and also to confer with the board whenever the interests of bee-culture in this State may be involved.

We recommend that a committee be appointed to confer with the regents of the State University on the feasibility of establishing a chair of apiculture at the University, and perhaps of associating an experimental station with it.

GEO. F. ROBBINS,

J. Q. SMITH,

S. N. BLACK,

Committee.

GETTING APIARIAN INFORMATION.

The committee on census reported as follows, which was adopted as amended:

Resolved, That on or before the 15th day of May, July, September and October, the Secretary be instructed to send out a return postal card to each of the members of the Association, requiring reports as follows:

- 1st. The number of colonies.
- 2d. The prospect of a honey crop.
- 3d. The amount of honey gathered to date.
- 4th. Is the honey gathered No. 1, or not?

It shall be the duty of the Secretary to send the above report, each month, to the bee-papers for publication.

C. BECKER,

J. Q. SMITH,

A. N. DRAPER,

Committee.

Mr. George Ball, Treasurer of State Grange, visited our meeting and received a vote of thanks from the Association for his friendly acts displayed in the signing of railroad certificates, etc.

The committee for the same reported (and the report was adopted) favoring an experimental station to be conducted by a person to be named by the State Bee-Keepers' Association.

I will say here that the meetings in session in the State House failed to get the required number (250) to secure their return one-third rate. It was promised by the passenger agency, and when they found we were all going to meet at the same time, they raised the required number from 100 to 250. On account of their acts, the various societies "resolved."

The Bee-Keepers' Association discussed the manner in which the railroads had treated them, and although they failed to take action on the subject, yet the Secretary of this Association was appointed on a committee composed of

Messrs. Small, Miller, Stone, Pearson and Johnson, in the State Horticultural Society, which formulated the following resolution, which was adopted:

WHEREAS, while we are working in the interests of our society, we know that every car-load of fruit we induce our citizens to raise, that the railroads are sure to get the benefit from carrying it, and therefore our interest is their interest, then let them help themselves by helping us; therefore

Resolved, That as the people furnish the patronage of the railways, they are at least entitled to the privilege of protesting against any injustice or oppression at the hands of railway corporations; that the railways, by combining and forming traffic and passenger associations, tie their own hands, and require from societies holding annual meetings, that the number in attendance shall be 250, thereby working a virtual prohibition of attendance upon such annual meetings, which will ultimately destroy them entirely; and be it further

Resolved, That we favor a general rate of two cents per mile for carrying passengers upon all first-class railways in this State, and ask our representatives and senators to favor their constituents with a law fixing two cents a mile as the legal rate to be so charged in this State.

The following resolution of greeting, drawn by a committee appointed for the purpose, was adopted:

To the Horticulturists and State Grange, now in session in this building:

We, the Bee-Keepers' Association of this State, send cordial greetings and tender our thanks for courtesies received, and hope that our interests may be mutual in the future as in the past.

Signed,

S. N. BLACK,

C. M. BEALL,

J. Q. SMITH,

Committee.

A motion was made by C. P. Dadant that Jas. A. Stone be instructed to confer with the State Board of Agriculture on their premium list in reference to honey exhibits, as in first annual report of this Association. Carried.

The election of officers for 1894 resulted as follows:

President—Hon. J. M. Hambaugh, of Spring, Brown county.

Vice-Presidents—1st, C. P. Dadant, of Hamilton; 2d, J. Q. Smith, of Lincoln; 3d, S. N. Black, of Clayton; 4th, Mrs. L. Harrison, of Peoria; and 5th, Chas. Hertel, of Freeburg.

Secretary—Jas. A. Stone, of Bradfordton.

Treasurer—A. N. Draper, of Upper Alton.

Mr. Robbins offered a resolution of thanks to the Legislative committee for their conscientious performance of the duties entrusted to them. Adopted.

On motion, it was voted that each member of the Association be requested to send a copy of the resolution of this society, relative to adulteration, to their various members of Congress, with the solicitation of their assistance in having it enacted into law.

Resolutions of greeting were received from the State Horticultural Society and the State Grange, all in session in the State House at the same time, as follows:

STATE HOUSE,

SPRINGFIELD, ILL., Dec. 13, 1893.

To our fellow-colaborers, the Members of the Illinois Bee-Keepers' Association:

Brethren—Feeling that our interests are identical, although we each aim to accomplish the same end by different means—you by extracting the sweets from our blossoms; we, (while you are deriving benefits from the mixing of the pollen to fertilize and make our trees and plants fruitful), expecting to derive our reward from the sale of the perfected fruit—we desire to extend to you the right hand of fellowship, and wish you success in your effort to extend the

production of honey, and, notwithstanding the fact that your bees may get their heads together and plot for the eating of our grapes and other fruits, yet we still have faith in the utility of the little bee as a helper to the fruit-grower, and admire her industrious and business habits.

Adopted this 13th day of December, 1893.

Attest:

H. M. DUNLAP,
Secretary.

HENRY AUGUSTINE,
President.

STATE HOUSE,
SPRINGFIELD, ILL., Dec. 13, 1893.

To the Bee-Keepers' Association of this State:

Your kind greeting to the members of the State Grange just received and contents noted. In reply, the State Grange cordially reciprocates the kindly feelings manifested, and hope that nothing in the future may disturb the same.

Respectfully yours,

E. A. GILLER, P. M. Ill. State Grange,
Committee.

Mr. C. P. Dadant read an essay at the evening meeting of the Horticultural Society, on "The Importance of Bees in Horticulture," which was received with the best of feeling among the horticulturists, many of whom are also bee-keepers. The essay follows:

Bees and their Relation to Horticulture.

Mr. President:

Bee culture is probably the most neglected of rural pursuits. It is generally considered of very minor importance, and the fear of the sting is the leading cause of the farmer's disregard for the production of honey. It is the main obstacle in the way of the pursuit, but the difficulty is more imaginary than real, for with a good bee-smoker and a bee-veil even a timid person, if careful and under proper instructions, can tame and handle the most vicious colony of either common or Italian bees, the latter being much the gentler of the two races.

That horticulture, and floriculture as one of its branches, are beneficial to the bees, no one will ever deny. Bees live upon the sweets of flowers, and after our forests have been destroyed by the chopper's ax, after our brush-wood thickets have been grubbed out, after our marshes have been drained and plowed till they grow nothing but field crops, it is mainly to the horticulturist's domain and to the pasture land of the dairyman that our bees look for their support.

It is true, that honey, "the sweetest of all sweets," is found but in a limited quantity in the flower garden, the finest of our garden flowers yielding no honey at all. And by the way, I shall ask my hearers to mark this peculiarity, as I shall refer to it again.

But the orchard is a glorious field for the bees, although its earliest blossoms come at a time when but little profit may be derived from them by the bee-keeper, owing to the great consumption of honey by the bees at that date to rear brood. But apple-trees, raspberry and blackberry bushes and all other late blossoming trees, shrubs and plants, whether ornamental or useful, with very few exceptions yield honey which is generally of best quality, and which compares favorably with the staple of Illinois honey, white clover.

On the other hand, it is evident, although not so popularly admitted, that bees are necessary to the greatest number of blossoms, whether these be domestic or wild, for the fertilization of the seed. This may readily be demonstrated.

Most of my hearers are undoubtedly acquainted with the structure of flowers, and with the rules that control plant fertilization. There are male and female organs in plants as well as in animals. Usually these are found together in the same blossom, the pistil or main stem of the blossom bearing the seed, being the female organ, and the stamens or male organs surrounding it bearing the pollen or fertilizing dust without which fruit cannot be formed. In some plants, as in corn, the male and female organs are some distance apart and on different blossoms. In others, as in hemp, the male

and female organs are on different plants. In others again, under domestication, as in the strawberry, some plants have incomplete flowers, which cannot be fertilized without the help of other blossoms in their near vicinity.

In most of these cases the bees help the fertilization of the flower. Their role is to feed upon the products of the blossom. Its fragrance attracts them. They lap the honey and store it in their honey-sack, or first stomach. But after doing this, they do not usually leave the blossom till they have gathered a little of the pollen or fecundating dust and packed it on their posterior legs in a cavity or basket which nature has provided for this purpose. This pollen, often called bee-bread after it has been brought to the hive by the bee, is used to feed the young bees or larvæ after it has been mixed with honey. The evidence of the purpose which bees serve in the fertilization of blossoms comes out very strongly when we consider this method of carrying home the pollen, for if it was swallowed as the honey is, there would be little chance for any of it to be scattered on other flowers and serve the purposes of fecundation. The cavity on the tibia of the bee and the hair surrounding this cavity which help hold the load in the basket have been very properly compared by an English scientist, Mr. Cheshire, to an English wagon-rack, loaded with loose hay, and the grains of pollen drop from the load during the motions of the insect, as hay drops from a rack with each jolt of the wheels in motion. In addition to this, when the bees visit blossoms that contain a great deal of pollen this dust sticks to the hair of their body till they seem to have actually rolled in it. Thus does the insect help the fecundation of the blossom and the greater bearing of fruit, not only because pollen is carried to blossoms that could not otherwise receive it, but also because it is transmitted from one tree to another, causing hybridization and creating new varieties.

Under cultivation, some of our garden blossoms greatly increase the number and size of their petals, so much that the natural purposes of the plant are lost, there is no honey

in the calyx, insects do not visit it, and it bears no seed. It is certain that red clover bears but little seed on its first crop owing to the comparatively small number of bumble-bees in early summer, and also because its corolla is then so deep that honey-bees cannot reach to the bottom of it. It is well known that red clover failed to produce seed in Australia until the bumble-bees were imported there.

All this tends to prove that the pollen of one blossom, and even of one plant, is not always fit to fertilize its own seed, and that plants, like animals, may become barren by too close consanguinity. This explains why fruit bloom is so often sterile when the weather during bloom is unfavorable to the insects' visits.

It has been argued by some that the honey which flowers produce, if not gathered by insects, is reabsorbed by the blossoms themselves, and serves to nourish the fruit. They claim that some fruit fails to develop properly owing to the lack of this supposed nourishment. This argument can be silenced by two facts. The fruit blossoms set best in the seasons when the insects' visits to them are most frequent, and among the noxious plants to the farmers, those that are most visited by bees, knot-weed and Spanish needles for instance, are also among the most prolific. If the bees' visits to these plants would hurt the seeds such weeds would sooner or later have become extinct.

From the facts above given, I believe all will agree with me that insects are necessary, or at least quite useful, in the fecundation of most seeds, and that the bees exist for this purpose. Whether we believe that all things have been created for a special purpose which they fulfill in nature, or whether we believe that in the eternal working and changes of nature the survival of the fittest is the sole rule, our conclusion must be the same. Bees go to blossoms for honey and pollen, because blossoms produce honey to attract them.

Now, aside from the help that the bees give to our orchards and gardens, will it pay to keep them for the honey they produce?

To this I answer, yes; it will pay any farmer or horticulturist to keep bees if he takes care of them properly. Bee-culture is like all branches of farming, and in fact like all industries and all branches of business, it will pay only if properly attended to.

The farmer who plants his corn and leaves it to take care of itself after planting cannot depend upon a crop any more than the bee-keeper who leaves his bees without shelter in a hard winter, without food after a protracted drouth, without room for their surplus during a good season, or without protection against their natural enemies when they are weak in numbers. Bees need but little attention, but that little they must have, and at the right time. Unlike the rest of our domesticated animals, they usually ask but the shelter, and they feed and board themselves with the greatest economy.

I cannot go into the details of bee-keeping in an essay like this. Those desirous of enlightening themselves on the most successful methods of taking care of them and making their culture profitable, will find directions in the text-books relating to this industry. Bee-keeping is quite a study and cannot be taught in a half-hour of instruction. But I will mention one point of progressive bee-keeping that will show you at a glance some of the benefits that may be derived from an intelligent study of the subject.

Bees in a state of nature are usually very thinly scattered over the wilderness, and for this reason a large number of drones are necessary in each colony, so that the young queens may readily find one in their bridal flight which takes place in the open air and away from the hive within six days after their birth. The queen is the breeder, the mother, in each hive, and her loss when hunting for a mate, previous to entering upon her duties, would cause the loss of the colony within a relatively short time. For this reason bees are endowed with a propensity for rearing a large number of drones, and in each hive when combs are built naturally, over ten per cent. of them are drone combs. Under domes-

tication, a number of hives being kept in the same apiary in close proximity to one another, the drones of one hive or two are sufficient for all mating purposes, and those of other hives are superfluous. With the new methods, the bee-keeper may replace the most of the superfluous drone comb with worker comb. The result is, that instead of rearing 5,000 idlers in each square foot of the comb thus removed and replaced, the bees, with no more expense and labor, rear in the same space nearly 8,000 worker bees, which instead of consuming honey add a host to the swarm of honey gatherers in the height of the honey season. "The drone," says Butler, a writer of the 17th century, "worketh not at all, either at home or abroad, and yet spendeth as much as two laborers." This was written in 1609, and we can, to-day, vouch for the correctness of the statement. Neither is the drone to blame for this, for he is "not built that way." He has no sting to defend himself, no suitable proboscis for gathering honey from the flowers, no baskets on his thighs for holding pollen, and no pouches for secreting wax. He is evidently expected by the bees to consume only their surplus, for in seasons of scarcity he is killed mercilessly even before the scanty crop is over, while in seasons of plenty he is sometimes fed until winter. It is asserted by practical bee men that one square foot of drone comb removed from a hive and replaced with worker comb, in the manner mentioned, will represent a difference of more than ten pounds in the honey surplus during a good season. This is only one instance of the great difference in results between the luck-in-bees of our ancestors and the present methods of management.

The actual results of the past thirty years have shown us personally, that in an average location, in this State, a bee-keeper, who manages his bees properly, may depend upon an average crop of forty to fifty pounds per colony annually. In locations where bees are situated near large orchards, where pasture is plenty and low lands in close proximity, the annual yield is still greater.

DISCUSSION.

Mr. Hartwell—I keep bees especially for the purpose of fertilizing. I feel morally sure that they are a great benefit to the fruit. I noticed this year more especially in regard to the strawberries. I never saw bees live on strawberries as they did this year, and I had a very large crop. I know that bees are a great benefit to the fruit.

H. J. Dunlap—Bees are generally considered beneficial as they assist in fertilizing the blossoms, but there is a wide difference of opinion among fruit growers as to their destructive qualities. Do they suck the juice from grapes, peaches and other delicate fruit, is a question that will perhaps never be settled satisfactorily to all. I do not believe the damage they may do is nearly so much as the good. Still I have known cases where bees cleaned out a trellis of grapes in three or four days, where it was evident that birds were not the first depredators and punctured for them. It is asserted that the bee is unable to puncture anything, as its mandibles are made only for grasping, and that some other insect first opens the way for it to insert its pump.

Mr. Dadant—This is a subject which has been discussed considerably. The pupils of one of the schools at home came upon the bee question in their course of study, and the teacher requested that I go to the school house, attract the bees there, give them some fruit and see what the result would be. I did as requested, and in that way convinced the pupils, as well as the teacher, that bees were a benefit rather than a detriment to fruit. If there is anyone who is in doubt about this, try for yourself and see what the result will be. Try and experiment for yourself before you know they are not beneficial. I have placed bunches of grapes in a hive and instead of sucking the juice out, as they certainly would have done if possible, and being unable to remove the berries, they covered them with wax, as they do all foreign substances which they cannot remove.

Mr. Black—I think that bees are beneficial; I wish that those who have opportunity would experiment next summer,

and report the result at the next meeting; do not take any one's word for it, but examine for yourself.

Mr. Buckman—Bees certainly do great harm to grapes. I have seen two or three bees on a grape, apparently having their heads together, and soon thereafter there would appear a flat depression on the skin of the fruit, and a little later the whole inside of the fruit would be gone. I am sure the bees puncture the skin of fruits.

Mr. Dadant—It is impossible for them to do so. Their mandibles are spoon-shaped, soft and they cannot bite, but if there is anything they can clasp they can remove it if not too large for their strength. They remove cloth by pulling the fibers out, and so they will do with any article that they can grasp.

Mr. Hartwell—My experience is similar to that of Mr. Dadant's. I have been a bee-keeper and had quite an experience in that line, and I think the little bee has been a great benefit to me. Some years ago I had a plum crop when, had it not been for the bee, I would not, and in regard to grapes, I have never found that bees injured them. I would advise the gentleman who says they are injurious to the grapes, to give it a fair trial. I have made a close study of this for years, and feel as Mr. Dadant does, that we could not get along without the little bee.

Mr. Riehl—I know that bees do not injure some fruit, but I do think they are injurious to the peach and grape. We have about 20 stands of bees, and besides having all the honey we want to use on the table, I sell from \$50 to \$300 worth of honey a year. There is this about it, however, you can't keep bees and make them pay unless you make it a study.

Mr. Vandenberg—I have about 60 or 65 stands of bees. I have several acres of small fruits, and I think it pays to keep the bees for fertilizing purposes.

A resolution was reported and adopted, as follows:

Resolved, That the Illinois State Bee-Keepers' Association desire to return their sincere thanks to the Hon. E. L. Merritt, Chairman McKinlay, and others in the House, and Senator Dunlap and others in the Senate, for their valuable services in obtaining the appropriation for the honey display at the World's Fair.

Signed, S. N. CLARK,
 J. Q. SMITH,
 J. A. STONE,
 Committee.

Motion was made by Geo. F. Robbins, that two others be associated with J. A. Stone, to confer with the State Board of Agriculture concerning the premium list, and that they be entrusted with the matter provided for in report of committee. Adopted.

W. J. Finch, Jr., and George F. Robbins were so appointed.

On motion of S. N. Black, the following resolution was adopted:


Resolved, That we return thanks to the Secretary of State and officials at the State House for the many favors received during the meeting.

The following resolution was adopted:

Resolved, That we believe the best interests of the State demand that the State Fair be permanently located at the capital of the State.

S. N. BLACK,
JAS. A. STONE,
Committee.

On motion, the Secretary was voted \$25 for his services for the past year.



REPORTS OF BEE-KEEPERS.

C. P. Dadant, of Hamilton—Number of colonies, 350; increase, 30; honey produced, 400 pounds of honey-dew and 500 pounds of Spanish-needle honey. Bees in good condition for winter, packed out-of-doors.

Geo. Poindexter, of Kenney—Number of Colonies, 90; increase, 3. Amount of honey obtained, 2,000 pounds of clover, and 800 pounds of extracted fall honey. Bees wintered in the cellar, and are in good condition now. He clips the queen's wings to prevent swarming, and believes in ventilation to induce the bees to work in the supers.

A. N. Draper, of Upper Alton, had about 300 colonies in the spring, and sold 60 colonies, with no increase during the season. He had about enough honey to winter the bees; winters out of doors, packed in forest leaves. His bees are kept in four apiaries. He says that white clover was a failure this year. He prevents swarming by having large hives and plenty of ventilation. He harvested the most honey from asparagus, of which there are a hundred acres in the neighborhood. This honey is of poor quality.

Chas. Becker, of Pleasant Plains, had 53 colonies in the spring, and increased to 62. He took about 700 pounds of honey. The bees are in good condition for winter. He grows small fruit in connection with bee-keeping. For extracting he uses three sets of full frame supers full of comb to each hive. Induces the bees to go into the supers by placing partly filled sections in the middle of the supers. He raises the hives from the bottom-board during the swarming season, and thinks it prevents swarming, and induces the bees to work in the supers.

J. Q. Smith, of Lincoln, had 53 colonies in the spring. Increase, 23. He had no honey until August, except honey-dew, which he fed to the young swarms. In the latter part of August he got 1,800 pounds of fair fall honey, principally heartsease and sweet clover, with Spanish-needle at the last. He wintered his bees on the summer stands, packing the top

with leaves, and no protection on the sides. Apiary sheltered from high winds by building and fences. He kept bees 18 years for pleasure and recreation, but thinks they always paid him well for the attention given them. Has two stands of good hybrids.

Geo. F. Robbins, of Mechanicsburg, had 60 colonies spring count, and increased to 80. He produced 600 pounds of comb honey, chiefly white clover, with very little tinge of honey dew, and 500 pounds of extracted, chiefly heartsease and Spanish-needle. Bees are in good condition for wintering out-of-doors. He covers the brood-frames for winter with honey-boards made of cheap lumber and burlap, with chaff or leaves above. He covers some of the smaller hives with larger ones, and fills the space with leaves.

Mr. Black asked Mr. Dadant if spring stimulating paid. Answer—If properly done it may pay. He used to practice it when they did their own work, but quit it when they began to hire. Mr. Dadant thought that bees wintered, and also went through the spring, better in the sun than in the shade. He thinks the chaff hive a failure.

C. M. Beall, of Clayton, had 10 colonies in the spring, and no increase. He had no honey except 150 pounds of honey-dew. The bees were in good condition for wintering in the cellar. He has no winter loss in the cellar.

J. M. Hambaugh, of Spring, had 115 colonies in the spring, and increased to 120. He produced 1,000 pounds of extracted—half honey-dew and clover mixed, the balance Spanish-needle of superior quality. His bees were in good condition for wintering, partly in the cellar and partly on the summer stands. He removes the honey-board for cellar wintering and replaces it with a ventilator, giving air at the top.

S. N. Black, of Clayton, had 37 colonies in the spring, and 44 now. He produced 150 pounds of mainly white clover, buckwheat and heartsease honey. Bees were in fair condition

for wintering. He has but little loss either in cellar or out-door wintering. He expected to put them into the cellar this winter.

Miss L. C. Kennedy and sister, of Pasfield, had 30 colonies in the spring; increased to 42 by natural swarming. This fall doubled up to 37. They are all full of bees and honey. Took a little over 1,300 sections of honey; sold \$169.70 worth of honey, \$11.50 of which was black honey that the neighbors came to the house and bought. Pretty well for two women, and a poor honey year at that.

J. A. Stone, of Bradfordton, had about 60 colonies in the spring; increased to 73. He produced about 400 pounds of comb-honey, 100 pounds of extracted. The beginning of the season it was a little clouded with honey-dew, then came the white clover. The greater part of his honey was fall honey—heartsease and Spanish-needle. He winters in the cellar and never has any loss, except from queenless colonies, or from those that are too light to carry through the spring season. He has tried chaff cushions, burlap, and dead-air space on top of hives during winter, and believes that cellar ventilation is the most important of all.

On motion by A. N. Draper, Article 5 of the By-Laws was amended, changing the words "Upon the Executive Committee," to "Upon an order signed by the President and countersigned by the Secretary." Carried by a two-thirds vote.

The Convention then adjourned *sine die*.

JAS. A. STONE, *Secretary*.

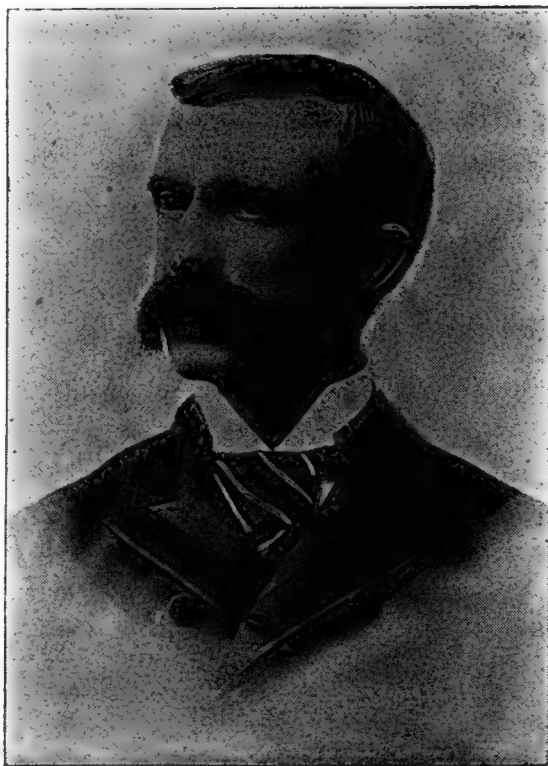
ILLINOIS HONEY EXHIBIT

— AT THE —

WORLD'S COLUMBIAN EXPOSITION.

[From the AMERICAN BEE JOURNAL, April 12, 1893.]

The Illinois honey exhibit at the World's Fair is a very great attraction. Bros. J. M. Hambaugh and Jas. A. Stone are entitled to much credit for the fine display that they have installed for the bee-keepers of the State of Illinois.



HON. J. M. HAMBAUGH, Spring.
President Illinois State Bee-Keepers' Association.

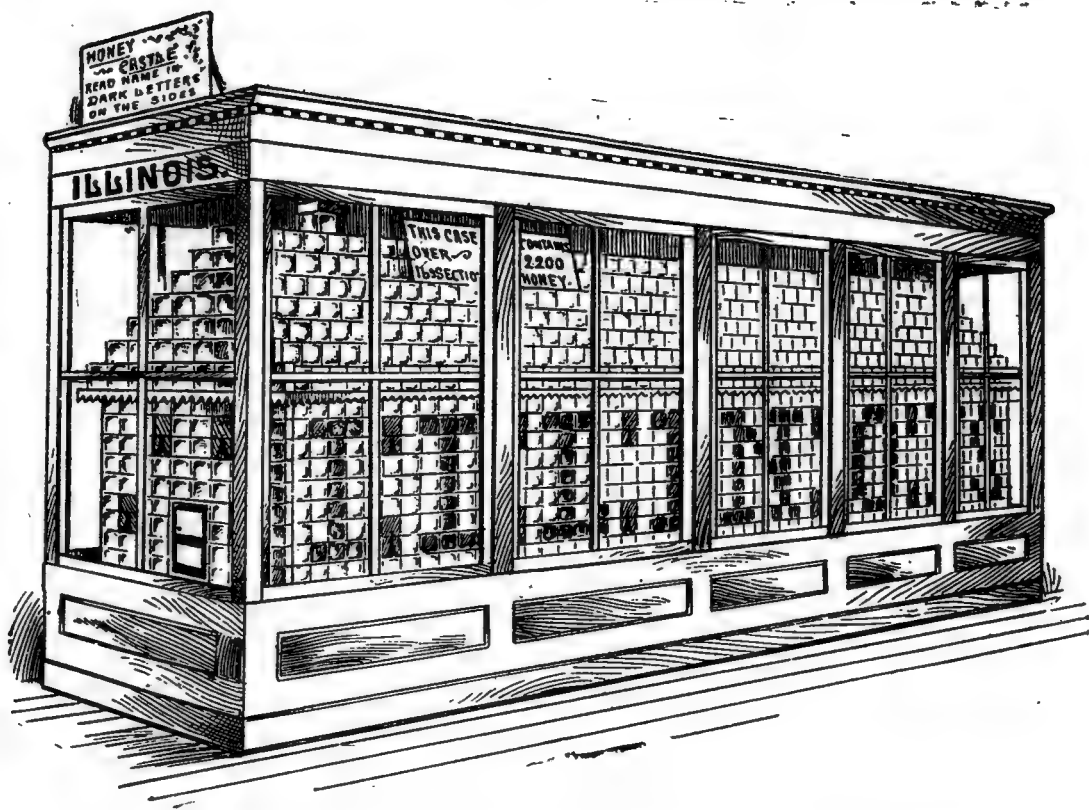
Considering the exceedingly limited time in which they had to complete the exhibit, it is indeed a remarkable showing of the industry in this State.

In order that the description of the illustrations of the exhibits may be better understood, we number them as follows:

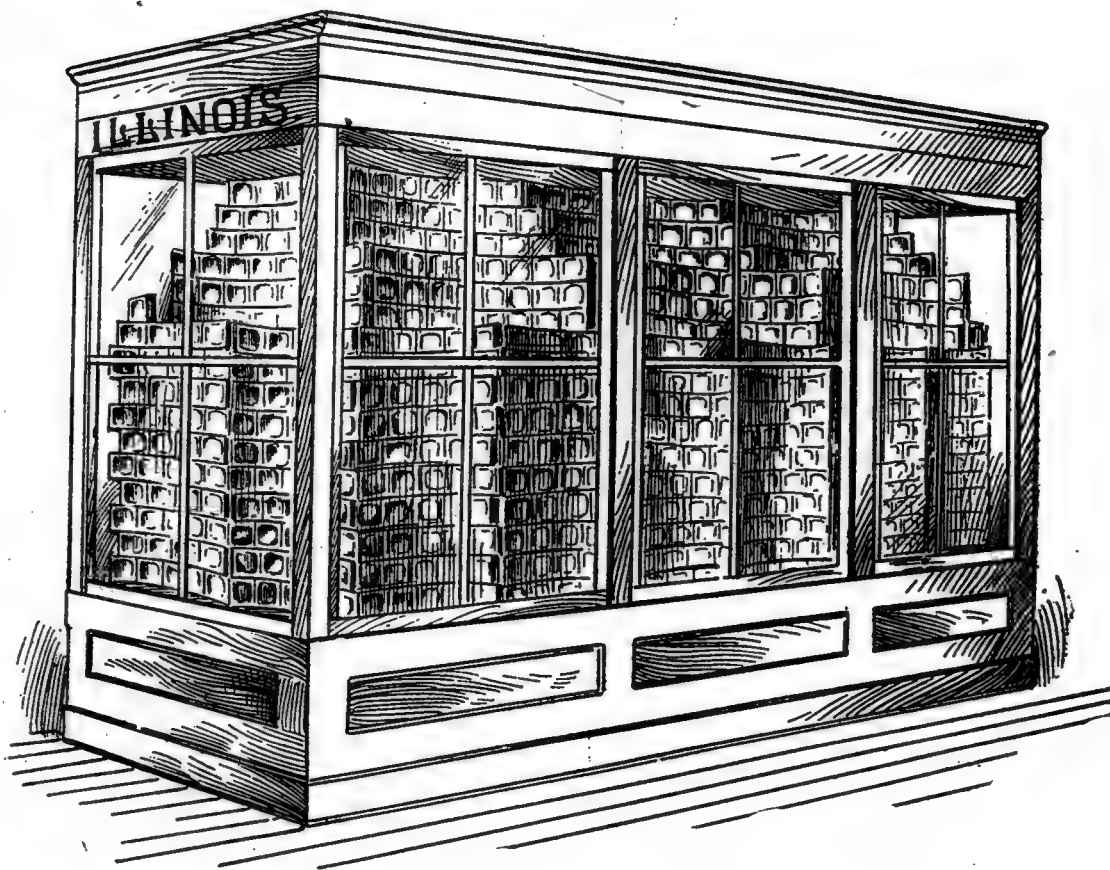
No. 1.—The first show-case you approach from the north has the "Honey Castle," which contains over 2,200 pounds of comb honey, with a placard in front stating these facts. There is sufficient dark honey in sections on the sides so that by their arrangement spells the word "ILLINOIS." A placard is posted in two different places worded thus: "Read name in dark honey." This castle was designed by Brother Hambaugh, with the exception of the lettering on the sides, which was put in by the suggestion of Bro. Stone. This piece of work nearly fills the entire case, which is about 25 feet in length, by 8 feet high and 5 feet broad.

No. 2.—Standing next to No. 1 on the south, is the competitive exhibits of virgin white clover honey, from various parties, chief among which are Dr. C. C. Miller, W. C. Lyman, L. Highbarger, E. Whittlesy, Jas. A. Stone, Geo. F. Robbins, Geo. Poindexter, G. D. Rogers and others. This case is 15 feet in length, and filled to the top in fantastic shapes. A placard on the sides reads thus: "All Illinois honey, this year's crop." A piece of work adorns the front of the case, that was made by the ingenious little honey-bee, under the guidance of Mr. Aaron Coppen, of Wenona, Illinois. It is the familiar inscription found on our coins, "In God we Trust." Mr. Coppen also sends his autograph, put up in the same way, viz: "A. Coppen, Wenona, Ill.;" but Mr. Coppen failed to send an exhibit of honey, owing to the prevalence of honey-dew in his locality, and he apologizes for the dark appearance of his mottoes, though they were considered very worthy of exhibition and were installed.

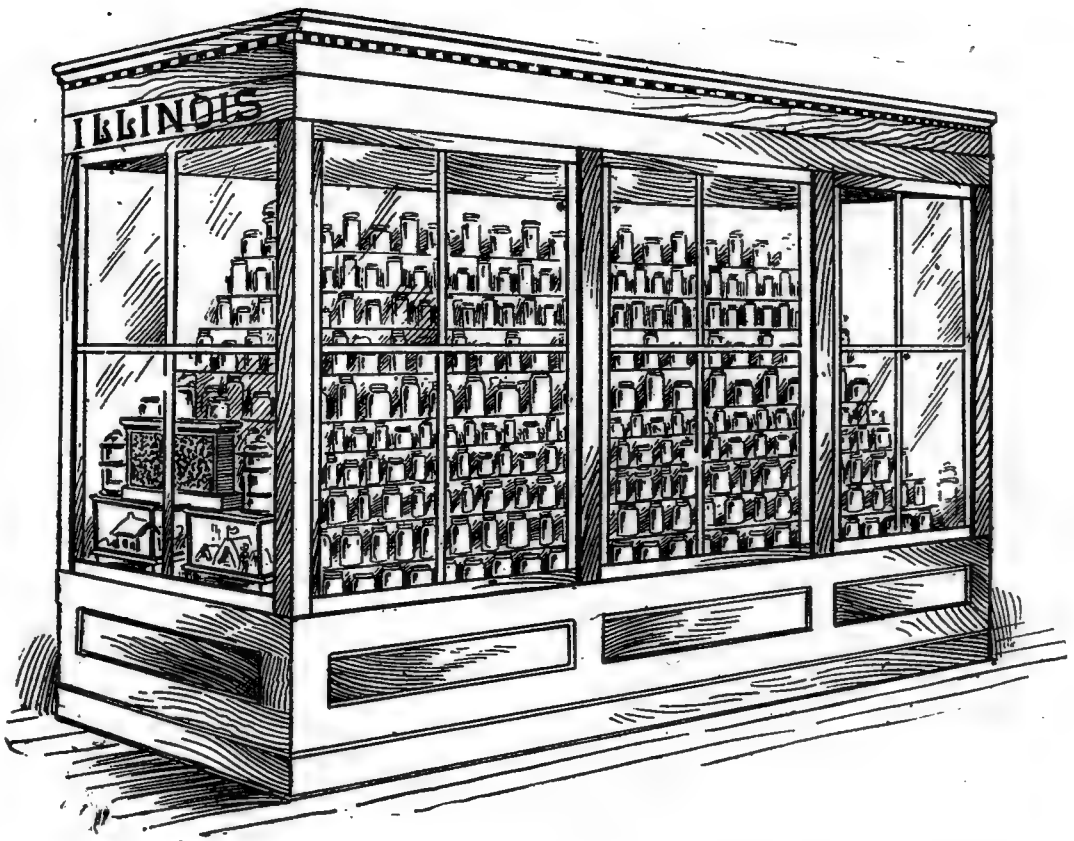
No. 3.—This case is called the "Puzzle Case," and is composed entirely of extracted honey put up in a multitude of forms, mounted in pyramid shape, and, to all appearances, counter-pyramid form. It is a puzzler to the unsuspecting



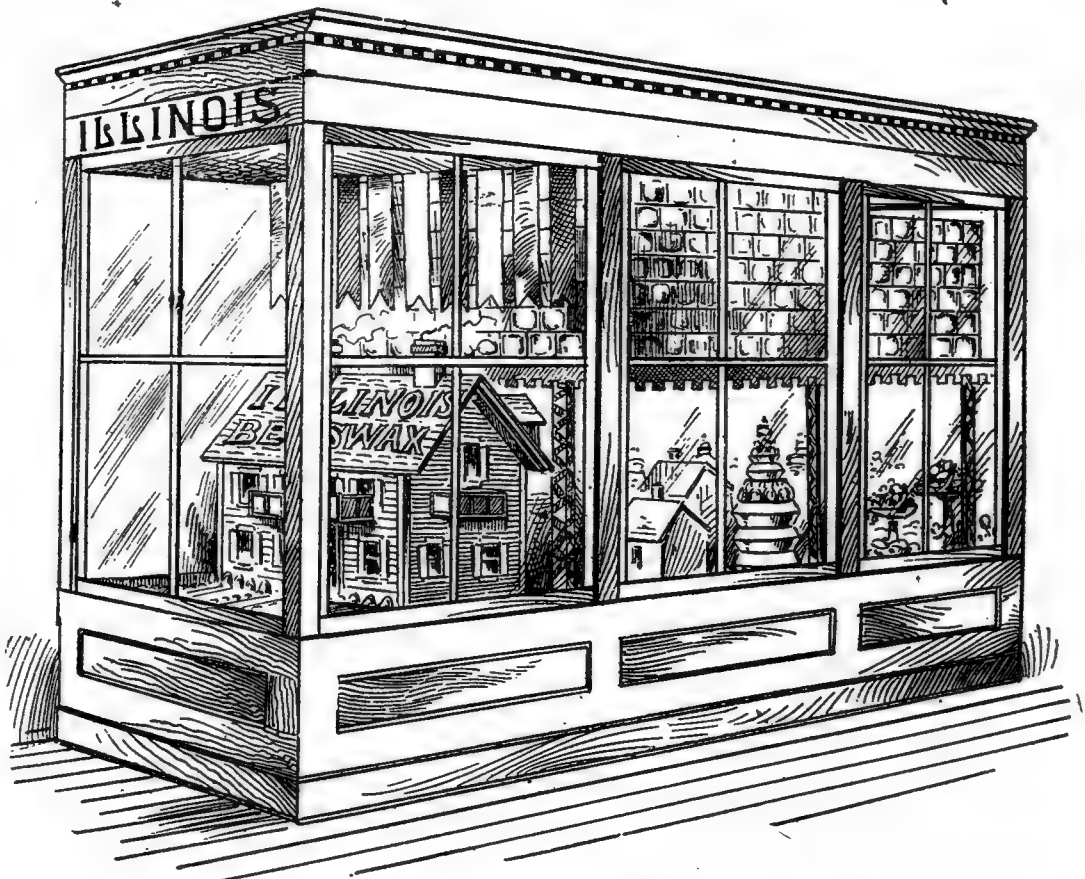
No. 1—The Illinois State Honey Exhibit at the World's Fair.



No. 2—The Illinois State Honey Exhibit at the World's Fair,



No. 3—The Illinois State Honey Exhibit at the World's Fair.



No. 4—The Illinois State Honey Exhibit at the World's Fair.

gazer. In this case will be seen the ingenious device worked out by the bees according to Bro. Poindexter's idea, entitled "Sweet Home." This is a complete cabin of honey, including door, window, old-fashioned chimney, etc. Installed near it is "Soldiers in Camp." This is a production of tenting grounds with honey, and soldiers standing as sentinels. It is very unique, and shows what can be done with the "busy bee." Surmounting these designs is an observatory hive of real live bees, belonging to Geo. F. Robbins, Mechanicsburg, Ill., but it must be understood they are not storing honey. A placard may be seen in front of the case, directing the observer to "See Above," and thus behold the pyramid of honey as seen in the mirror ceiling.

No. 4.—The next, and last, case on the south side is largely composed of the wax exhibit, containing about 400 pounds in numerous designs, chief among which is that of the comb foundation and wax exhibit of Chas. Dadant & Son, of Hamilton, Ill. Bros. Dadant have furnished a very interesting piece of work, and it never fails to catch the eye of the passer-by. It is a two-story dwelling-house, finely finished and elaborately colored in various shades of wax. The lettering along the roof reads, "Illinois Beeswax." Above and surmounting all, is seen in wax and honey, the words "World's Fair." This case is one of the most attractive in the whole exhibit. Mr. Geo. F. Robbins also contributed some interesting wax work. In quantity and variety of designs, this wax exhibit perhaps exceeds that of any other State.

There is also in the Illinois exhibit various forms of confectionery, made with honey in place of sugar. The cakes so made remain good for many years.

Above the show-cases is a large sign, 25 by 3 feet in size, upon which is painted, "ILLINOIS HONEY EXHIBIT." It can easily be read from the center of the Agricultural building, several hundred feet distant. The

Illinois Honey exhibit contains 5,677 pounds of comb honey and 2,055 pounds of extracted honey, making a total of 7,732 pounds.



JAMES, A. STONE, Bradfordton,
Secretary Illinois State Bee-Keepers' Association.

Our quartette of illustrations of the Illinois honey exhibit are singularly correct (with the exceptions of a few designs added since the artist made the sketches, as may be attested by those who have been so fortunate as to see the exhibits themselves. Hence those who may not be able to visit the Fair will now know just how the honey and wax exhibits of Illinois really appeared.

REPORT OF THE PROCEEDINGS
— OF THE —
TWENTY-FOURTH ANNUAL CONVENTION
— OF THE —
North American Bee-Keepers' Association
— HELD AT —
CHICAGO, ILL., OCTOBER 11, 12 and 13, 1893.

(Through the kindness of George W. York, of the *American Bee Journal*, we are permitted to print the report of the North American Bee-Keepers' Convention, and who also kindly furnishes us most of the cuts herein.)

The 24th annual meeting of the North American Bee-Keepers' Association was the most representative and largest gathering of bee-keepers ever held on the American continent, and met at the Louisiana Hotel, in Chicago, Ill., on Oct. 11, 1893. The President, Dr. C. C. Miller, was in the chair.

The Convention was opened with prayer by Mr. A. I. Root.

Mr. George W. York, in a pleasant manner, delivered the following appropriate

Address of Welcome.

Mr. President, Ladies and Gentlemen:

It is with a sincere feeling of pleasure that I am permitted to welcome to our Western metropolis, and at present the Mecca of the world, the grandest association of bee-keepers this continent has ever known. As a representative and resident of "Chicago, the Peerless," I offer to you not only "the keys of the city," that shall open the gates to all its

pleasures and wonders, but I also extend to you a most hearty and cordial welcome.

Many of those who are here before me have come from distant climes, and are now indeed in a "far country," but nevertheless remember that you are still in your "blessed homeland," and that the same God reigns here as in the sunrise East, in sun-crowned Canada, in the sunset West, or in the sun-kissed Southland. I trust that during your brief sojourn within our borders, you may all feel perfectly "at home;" and when your conventional labors are ended, your inclinations for sight-seeing are fully gratified, and you return once more to the loved ones around your various hearth-stones, permit me to express the hope that you may carry with you memories that shall serve as an inspiration in future days to nobler and better living, both for time and for eternity.

I realize that it is no small thing to welcome to our city the representatives of so honored and ancient an industry as bee-keeping; for ever since bees and honey were found in the ribbed carcass of the lion in the time of Samson, until the present hour, honey and its production have been the delight and profit of the sage as well as the peasant; and to-day I know, from my own experience with men and women, that many of the very best people in all the world are devoted to the honorable pursuit of apiculture.

Bee-keepers of America, while the horologe of time is striking the eleventh hour of the Century, I bid you welcome to Chicago—the eighth wonder of the world. Welcome, also, to the untold splendors and matchless magnificence of the beautiful "White City," within whose doors is the most marvelous collection of the handiwork of mankind that earth ever beheld. Yes, welcome to all these, for *all things* are theirs who believe.

Welcome, then, ye bee-folks, welcome!

To our cities grand and free;

May thy meeting prove as "blessed"

As thy little, busy bee.

GEORGE W. YORF.

After the welcome address, Dr. Miller delivered

The President's Annual Address.

Dear Friends and Fellow Bee-Keepers:

In looking over the published list of names of those who were to be in attendance at this Convention, I could count a quarter of a hundred with any one of whom it would be a real pleasure to spend a solid day in bee-talk. I have no doubt the same thing is true of you. The opportunity of meeting all these and more, at one time and place, is a "red letter" event.



Dr. C. C. Miller, Marengo, Ill., President of the Columbian Meeting.

Now, what are we here for? Not for bee-talk alone. No mean part of our enjoyment here is the cordial greeting and the hearty grasp of the hand. Some of those present we have known for years through the bee journals without ever having seen them. What a pleasure to meet them face

to face. Others, of whom we may never have heard, on acquaintance will be found well worthy our friendship. Still others are old and tried friends, who have a warm place in our hearts, whom we now meet again for the first time in months or years. Our circumstances are specially favorable to social intercourse, so many of us stopping at the same hotel, with our place of meeting under the same roof. Why shouldn't we have a social time?

Allow me to presume upon my position, to deliver a short lecture on etiquette. When two strangers meet, it is not considered good form, in general, for them to speak to each other without the formality of an introduction. In that introducing a mutual acquaintance gives the name of each, practically saying "Now you two know each other's names; you are each acquaintances of mine, and it is proper for you to talk to each other." In some cases, indeed, the knowledge of the mutual acquaintance goes no farther than to know the name, and in some cases hardly that, as in the case of the man of short memory, on attempting to give an introduction, who said: "Mr. Smith, allow me to introduce you to —er—," then hopelessly floundering in his attempt to recall the name, ended up by saying, "to this stranger."

In the present case, I think you will agree with me that the only condition necessary to make it proper for me to give you an introduction to a third person, is that the third person shall be a bee-keeper, and that I shall know his name. As we are all bee-keepers, that part of the condition is fully complied with, and each one can give his own name, so what need of further introduction? Let me lay it upon each of you, therefore, not to wait for it. If you want to know the exact words for the highest form of politeness, you can say, "My name's Smith, who are you?" And the one who speaks first is the more mannerly of the two.

So much for pleasure.

As to business, I conceive the most profitable part of a Convention to be its discussions. Our journals are invaluable, but the rapid exchange of ideas allowed in the discus-

sions of a convention has brought to light many a truth that otherwise would never have become public property. It might be in order for me to recall some of the topics that have interested bee-keepers during the past year, and to suggest which of them may be profitably discussed here, but what need? You know what they are without being told. Our Secretary has selected some, but has wisely left plenty of room for others. These may be brought out through the question box. Let me earnestly exhort you to make full use of this. If there is a question in your mind as to anything in the realm of practical bee-keeping, put that question in the question-box. It may interest others, as well as yourself, and if not profitable for general discussion, little time need be spent upon it. But in no way can we so well meet the wants of all as by use of the question-box, providing each one uses it. And now lets get to business.

C. C. MILLER.

On motion by Hon. R. L. Taylor, seconded by Dr. A. B. Mason, it was voted that a committee of five be appointed to arrange the programme for the following sessions, so that every one could attend the sessions when the subjects they would be specially interested in would be presented. The following committee was appointed by the President: Hon. R. L. Taylor, Mr. W. Z. Hutchinson, Mrs. L. Harrison, Hon. J. M. Hambaugh, and Mr. E. Kretchmer.

The report of Mr. Frank Benton, Secretary of the Association, was then read; also letters of regret for their absence from Hon. Christopher Grimm, of Jefferson, Wis., and Mrs. Jennie Atchley, of Beeville, Tex., the latter being prevented from attending on account of sickness in the family. Mrs. Atchley also suggested that it might pay to move bees from Illinois to the south to winter, and then move them to the north in time for the white clover harvest the following season. Mrs. A. L. Hallenbeck, of Millard, Neb., also expressed regret, as did a number of others who were compelled to be absent.

The Treasurer, Geo. W. York, then read his report, which will appear later on.

At this point a recess was taken for the reception of membership fees, etc.

During the first recess, and at various times thereafter, the following lists of members were made up:

List of Annual Members.

Rev. E. T. Abbott	St. Joseph, Mo.
R. Aikin	Loveland, Colo.
J. Alpaugh	St. Thomas, Ont.
A. E. Ault	North Liberty, Iowa.
C. S. Avery	Omaha, Neb.
Ezra Baer	Dixon, Illinois.
M. M. Baldridge	St. Charles, Ill.
A. Y. Baldwin	DeKalb, Ill.
B. T. Baldwin	Marion, Ind.
G. G. Baldwin	Port Huron, Mich.
J. S. Barb	Oakfield, Ohio.
E. J. Baxter	Nauvoo, Ill.
M. G. Beals	Oto, Iowa.
Frank Benton	Washington, D. C.
Ralph Benton	Washington, D. C.
Dr. H. Besse	Delaware, Ohio.
C. Blackburn	Lamont, Iowa.
Joseph Blanchard	Brimfield, Ill.
M. Blanchard	Hilbert Junction, Wis.
Henry E. Bliss	W. Winfield, N. Y.
W. B. Blume	Norwood Park, Ill.
H. R. Boardman	East Townsend, Ohio.
Elmer Bridenstine	North Liberty, Iowa.
Edgar Briggs	Poughkeepsie, N. Y.
A. A. Brimmer	Hoosick, N. Y.
L. Brock	Littleton, Colo.
James H. Brown	Rochester, N. Y.
Dr. O. S. Brown	Londonderry, Ohio.
H. Burkhard	Malcolm, Neb.

J. W. Caldwell.....	Steamboat Rock, Ia.
A. Christie	Smithland, Ia.
C. C. Clemons	Kansas City, Mo.
N. Cochems	Los Angeles, Cal.
E. W. Coe.....	Clarence, Iowa.
W. L. Coggshall.....	W. Groton, N. Y.
J. N. Conger.....	Wyoming, Ill.
Prof. A. J. Cook	Agricultural College, Mich.
A. Coppin.....	Wenona, Ill.
J. E. Crane.....	Middlebury, Vt.
G. A. Cressy	Hilbert, Wis.
Louis Dadant	Hamilton, Ill.
Rev. T. C. Davies	Idlewood, Pa.
Levi DeFreest	Troy, N. Y.
John Y. Detwiler.....	New Smyrna, Fla.
Jacob Dickman	Defiance, Ohio.
C. H. Dibbern.....	Milan, Ill.
L. F. Dintelmann.....	Belleville, Ill.
W. B. Downing	Lexington, Ky.
D. L. Durham	Kankakee, Ill.
C. D. Duvall.....	Spencerville, Md.
P. H. Elwood	Starkville, N. Y.
P. J. England	Fancy Prairie, Ill.
J. L. Ernst.....	Winslow, Ind.
Fred H. Fargo	Batavia, N. Y.
Wm. Filmar	Southwold, Ont.
W. J. Finch, Jr.	Springfield, Ill.
M. O. Fisher	E. Liverpool, Ohio.
James Forncrook	Watertown, Wis.
J. A. Foster.....	Tilbury Centre, Ont.
Oliver Foster	Mt. Vernon, Iowa.
L. D. Gail	Stedman, N. Y.
P. A. Garretson.....	Hillsborough, N. J.
F. A. Gemmill	Stratford, Ont.
Geo. H. Goodwin.....	Farmington, N. H.
James A. Green	Ottawa, Ill.
W. H. Green	Denison, Ohio.

Dr. P. C. Gress.....	Atchison, Kan.
D. H. Gridley	Breakabeen, N. Y.
Henry F. Hagen.....	Rocky Ford, Colo.
Hon. J. M. Hambaugh.....	Spring, Ill.
M. B. Hammond	Ellensburg, N. Y.
Gottfried Harseim	Secor, Ill.
S. H. Herrick	Rockford, Ill.
O. L. Hershiser.....	Buffalo, N. Y.
L. Highbarger	Leaf River, Ill.
C. B. Hills	Wellsville, N. Y.
Hon. Geo. E. Hilton.....	Fremont, Mich.
R. F. Holtermann.....	Brantford, Ont.
H. S. Huggett	Fulton, Mo.
W. Z. Hutchinson.....	Flint, Mich.
A. Jacobson.....	Nordness, Iowa.
Wm. James.....	Pleasant Hill, Neb.
Thos. Johnson.....	Coon Rapids, Iowa.
Sarah E. Joslin	Cincinnati, Ohio.
V. W. Keeney.....	Shirland, Ill.
W. L. Kemp.....	Farmington, Pa.
B. Kennedy.....	New Milford, Ill.
T. Frank King	Landover, Md.
Otto Kleinow	Detroit, Mich.
N. A. Knapp	Rochester, Ohio.
Charles Knautz.....	Galena, Ill.
E. Kretchmer	Red Oak, Iowa
Miss Valencia Kretchmer	Red Oak, Iowa.
Ward Lamkin	Goodyears, N. Y.
C. F. Lang.....	La Crosse, Wis.
J. H. Larrabee.....	Larrabee's Point, Vt.
H. H. Lawrence.....	Columbia City, Ind.
E. S. Lovesy	Salt Lake City, Utah.
D. B. Lovett	Crestline, Ohio.
W. C. Lyman.....	Downer's Grove, Ill.
M. H. Mandelbaum	Chicago, Ill.
Henry Marden.....	Roodhouse, Ill.
P. E. Marston	Beloit, Wis.

Lot Mason.....	Auburn, Ill.
C. E. Mead.....	Chicago, Ill.
H. C. Mellon.....	Dixon, Ill.
Amos Miller	Trail, Ohio.
R. Miller	Compton, Ill.
Isaac Moser.....	Adamsville, Mich.
John Nau.....	Middletown, Iowa.
John Nebel.....	High Hill, Mo.
Dr. Jesse Oren	Mt. Auburn, Iowa.
E. N. Parchall	Cooperstown, N. Y.
C. E. Parks.....	Watertown, Wis.
Henry N. Patterson.....	Humboldt, Neb.
J. A. Pearce	Grand Rapids, Mich.
James Poindexter.....	Bloomington, Ill.
E. C. Porter	Lewiston, Ill.
W. S. Pouder	Indianapolis, Ind.
Allen Pringle	Selby, Ont.
Geo. W. Redmond.....	Paris, Ill.
John Rey.....	E. Saginaw, Mich.
H. E. Reynolds	Westmoreland, N. H.
Huber Root.....	Medina, Ohio.
L. H. Root.....	Prattville, N. Y.
W. J. Rundell	Spring Valley, Minn.
Alex. Schmidt	Marysville, Kan.
Adam Schottler	Rockfield, Wis.
Geo. Sharpless.....	London Grove, Pa.
S. W. Snyder.....	Centre Point, Iowa.
Geo. C. Spencer.....	Addison, Vt.
H. D. Cutting.....	Tecumseh, Mich.
H. D. Spencer.....	Coventryville, N. Y.
N. Staininger	Tipton, Iowa.
Chas. Stewart.....	Sammons ville, N. Y.
E. H. Stewart.....	Niagara Falls South, Ont.
J. C. Stewart	Hopkins, Mo.
L. C. Stewart.....	Canaseraga, N. Y.
W. H. H. Stewart	Emerson, Ill.
Jas. A. Stone.....	Bradfordton, Ill.

N. L. Stow	S. Evanston, Ill.
E. A. Stratton	Horseheads, N. Y.
I. J. Stringham	New York, N. Y.
B. Taylor	Forestville, Minn.
Hon. R. L. Taylor	Lapeer, Mich.
C. Theilmann	Theilmanton, Minn.
B. J. Thompson	Waverly, Wis.
J. W. Thompson	Lester, Minn.
W. O. Titus	Toledo, Ohio.
L. E. Turner	Parkersburg, Ia.
W. H. Upton	Morning Sun, Ia.
J. Van Deusen	Sprout Brook, N. Y.
B. Walker	Evart, Mich.
F. C. Waters	McGregor, Iowa.
D. E. Weage	E. Gilead, Mich.
N. D. West	Middleburgh, N. Y.
J. C. Wheeler	Plano, Ill.
E. Whittlesey	Pecatonica, Ill.
Frank Wilcox	Mauston, Wis.
J. B. Wilhelm	St. Stephens, Ohio.
Florence Williams	Barnum, Wis.
M. L. Williams	Maysville, Ky.
C. E. Wright	Beaver Dam, Wis.
M. Wyrick	Cascade, Iowa.
J. W. Yocom	Williamsville, Ill.
George W. York	Chicago, Ill.

List of Lady Members Present.

Mrs. R. C. Aikin	Loveland, Colo.
Mrs. J. Alpaugh	St. Thomas, Ont.
Mrs. Dora Baldwin	Marion, Ind.
Mrs. Emil Baxter	Nauvoo, Ill.
Miss Alice Baxter	Nauvoo, Ill.
Mrs. M. G. Beals	Oto, Iowa.
Miss Mary L. Beck	Bethel, Ohio.
Miss Dema Bennett	New Bedford, Ohio.
Mrs. Frank Benton	Washington, D. C.

Miss Zoe Benton.....	Washington, D. C.
Mrs. C. Blackmer.....	Lamont, Iowa.
Mrs. Mary Blanchard	Hilbert Junction, Wis.
Mrs. Henry E. Bliss	W. Winfield, N. Y.
Mrs. Godfrey Brown	Bellevue, Iowa.
Mrs. Dr. Brown	Londonderry, Ohio.
Miss Jessie Coe	Clarence, Iowa.
Mrs. H. L. Coggs shall	W. Groton, N. Y.
Mrs. J. N. Conger.....	Wyoming, Ill.
Mrs. A. Coppin.....	Wenona, Ill.
Mrs. Geo. Cressy	Hilbert, Wis.
Mrs. H. D. Cutting	Tecumseh, Mich.
Mrs. Clara Denman.....	Pittsford, Mich.
Mrs. Jacob Dickman	Defiance, Ohio.
Miss Barbara Dintelmann.....	Belleville, Ill.
Miss Marcia A. Douglas.....	Shoreham, Vt.
Miss Maggie A. Duvall.....	Spencerville, Md.
Mrs. Fred H. Fargo.....	Batavia, N. Y.
Mrs. M. O. Fisher	E. Liverpool, Ohio.
Mrs. J. N. Heater	Columbus, Neb.
Mrs. J. M. Null.....	Miami, Mo.
Mrs. Alice E. Helter	Dixon, Ill.
Mrs. George E. Hilton	Fremont, Mich.
Mrs. H. S. Huggett	Fulton, Mo.
Miss Sarah Joslin	Cincinnati, Ohio.
Mrs. N. A. Knapp.....	Rochester, Ohio.
Mrs. Ward Lamkin	Goodyears, N. Y.
Mrs. H. H. Lawrence.....	Columbia City, Ind.
Mrs. L. P. Lyman.....	Downer's Grove, Ill.
Mrs. Dr. A. B. Mason.....	Toledo, Ohio.
Mrs. Dr. C. C. Miller.....	Marengo, Ill.
Mrs. Dr. Jesse Oren.....	Mt. Auburn, Iowa,
Miss Caroline E. Pendleton.....	Portland, Me.
Miss E. H. Pierson.....	Kellerville, Ill.
Miss Anna Rischer.....	Belleville, Ill.
Mrs. Sallie E. Sherman	Salado, Texas.
Mrs. A. A. Simpson.....	Swarts, Pa.

Mrs. Elva Smith.....	Pittsford, Mich.
Mrs. J. F. Spaulding.....	Charles City, Iowa.
Mrs. L. A. Spencer.....	Addison, Vt.
Mrs. C. Staininger.....	Tipton, Iowa.
Mrs. N. L. Stow.....	S. Evanston, Ill.
Mrs. E. H. Stewart.....	Niagara Falls South, Ont.
Mrs. R. L. Taylor.....	Lapeer, Mich.
Mrs. M. Louise Thomas.....	New York, N. Y.
Mrs. B. J. Thompson.....	Waverly, Wis.
Miss Maria Thompson.....	Waverly, Wis.
Miss Emma Wilson.....	Marengo, Ill.
Mrs. J. W. Yocom.....	Williamsville, Ill.
Mrs. George W. York.....	Chicago, Ill.

List of Honorary Members Present.

Dr. C. T. Riley.....	Washington, D. C.
J. W. Pender.....	West Maitland, Australia.
Dr. H. W. Wiley.....	Washington, D. C.

List of Ex-Presidents Present.

Prof. A. J. Cook.....	Agricultural College, Mich.
H. D. Cutting.....	Tecumseh, Mich.
Hon. Eugene Secor.....	Forest City, Iowa.
Thomas G. Newman.....	Chicago, Ill.
Dr. A. B. Mason.....	Auburndale, Ohio.
Dr. C. C. Miller.....	Marengo, Ill.
Hon. R. L. Taylor.....	Lapeer, Mich.

List of Life Members Present.

C. P. Dadant.....	Hamilton, Ill.
A. N. Draper.....	Upper Alton, Ill.
Mrs. L. Harrison.....	Peoria, Ill.
Dr. C. C. Miller.....	Marengo, Ill.
Chas. F. Muth.....	Cincinnati, Ohio.
Thomas G. Newman.....	Chicago, Ill.
A. I. Root.....	Medina, Ohio.
Ernest R. Root.....	Medina, Ohio.
Eugene Secor.....	Secor, Iowa.

List of Delegates Present.

W. R. Graham, of Greenville, Tex., from the North Texas Bee-Keepers' Association.

W. G. Larrabee, of Larrabee's Point, Vt., from the Vermont State Bee-Keepers' Association.

E. S. Lovesy, of Salt Lake City, Utah, from Salt Lake County Bee-Keepers' Association.

Henry N. Patterson, of Humboldt, Neb., from the Nebraska State Bee-Keepers' Association.

C. Theilmann, of Theilmanton, Minn., from the Minnesota State Bee-Keepers' Association.

Mrs. M. Louise Thomas, from the Philadelphia Bee-Keepers' Association.

After recess, Prof. Cook, of Agricultural College, Mich., read the following essay, entitled

Apiculture at Our Experiment Stations.

Bee-keeping has merits that very few, even of bee-keepers themselves, rightly appreciate. It not only gathers up a most wholesome and nutritious article of food, which would otherwise go wholly to waste, so far as man is concerned, but it confers an added benefit, that is so great and far-reaching that it is very difficult even to compute it.

There is nothing more certain than that the productiveness of very many of our fruits and vegetables—and those the most valuable—is often tremendously increased by bees, in the important work of pollenizing the flowers. True, other insects aid in this valuable service, but in our northern land so many of our insects are killed by the rigors of winter, that in early spring, when most of our fruit-trees are in blossom, there are very few of these “marriage priests” to perform the great service of wedlock in the vegetable world; and so without bees pollenization would be very scantily effected. There early flowering vegetables are imported, and so there are not the usual insects to perform this valuable service, and the bees, which are also imported, and which

from their habits and man's wise and provident care do not succumb to the winter's cold, become the chief agents in this important work. They are on hand when the flowers first burst forth, in earliest spring, and so celebrate the marriage rites without which these plants would be far less prolific. Is not the man who makes the twin apple replace the single fruit of yesterday, just as worthy as he who multiplies the grass production?



PROF. A. J. COOK.

The importance of bee-culture once appreciated and recognized, and it goes without saying, that every wise people will not only see that this industry does not languish, but will use every reasonable endeavor to foster its development in every proper way. Thus in urging such action, we need offer no apology; we are only doing what every wise statesman and well-informed, thoughtful patriot would do.

What adds emphasis to this argument, is the exceptional precariousness of bee-keeping as a pursuit. Most kinds of business can face a single "off year" with composure. Even two consecutive seasons of failure may be met with fortitude, unless they occur too frequently; but when three, or even four, years of failure confront the business man, it requires exceptional profits at other times, which bee-keeping is a stranger to, or else great love and enthusiasm for the business, which does characterize bee-keepers to an exceptional degree, to keep the ranks of such employment full. That there has been a great falling off in the business of bee-keeping of late is most certain. For the last two seasons the apple crop in Michigan has been very close to a failure. That it is wholly due to the absence of bees, I would not assert; but that there is an important relation between the two facts, cannot be truthfully denied. To urge all proper means to stay this rapid falling off and its attendant evils, is the duty of every patriotic citizen.

Experimentation and experiment stations are products of our nineteenth century civilization. The most advanced nations have done the most in these directions. Germany, to whom all other nations grant supremacy in all that pertains to education, progress and the real elevation of its people, is at the front in this important work, with France, the United States and Great Britain "a close second." This very fact, were it not for the rich and stupendous results of experimentation as exemplified in the work of such men as Koch, Pasteur, Lawes and Gilbert, Gray and Edison, would be proof enough of the value of experiment stations and their work.

There are to-day few bee-keepers that know all about the business, and they are usually box-hive bee-keepers who have never read the bee-journals, and can tell you all about the "king-bee." The most of us realize that this business is founded more upon genuine science than are most manual labor pursuits, is far from perfect, and that the wisest of the craft has yet much to learn, and that the business has

yet unsolved problems of greatest importance. I think there is no question but this business—important as it is—has a very bright future before it. Yet how can it successfully face the repeated disasters of the past few years, except as by study and experiment we learn how we may bridge such disaster. That bright men, full of energy and enthusiasm, to man the experiment stations in the several great honey-producing States, could, and would, with opportunity, accomplish great things for apiculture, is true beyond question.

The United States government, recognizing the importance of agriculture, and the added impetus given to any business as the result of wise experimentation carried on by experts, has donated \$15,000 annually to each State and Territory to be expended in carrying on experiments in agriculture. Forty-seven States and Territories have organized under this act, and have established stations, and have manned them with more or less efficient workers. Thus \$705,000, or almost three-fourths of a million dollars, are spent annually by our country to develop new truths, and further the interests of agriculture.

From what I have already stated, it is clearly evident that apiculture is a very important branch of agriculture. To foster its interests is the height of wisdom. Wise experimentation cannot fail to very greatly aid this important industry. Yet, in the face of all this, only four of the forty-seven States have done anything to promote the interests of bee-keeping; and in all of these cases money has been given in such a niggardly way that very little could be accomplished.

Think of it! Three-fourths of a million of dollars devoted annually to experiments in agriculture, and probably not two thousand—I think the amount is much less—not one-three-hundred-and-fiftieth of the whole given to aid apiculture! I say, without fear of contradiction, that this is a stupendous injustice. I affirm, with positive assurance that I am right, that the bee-keepers in every State where bee-

keeping is an important interest might, in all modesty, claim \$1,000 to be expended annually in behalf of their pursuit. This, in addition to the proceeds of the station apiary, would serve to secure one first-class man, the best that could be found, whose time should be given entirely to this work. And can we doubt that rich results would attend such effort? Then \$40,000, instead of a scant \$2,000, would be expended for such experiments. Even then, apiculture would fall short of its deserts, and would receive less than its exceeding importance might very justly demand.

But how can such action be secured? How can the board of directors of the several stations be brought to recognize the rights of bee-keepers, and the importance of their vocation in this very practical manner? It is by no means as difficult an undertaking as would seem. If bee-keepers will wake up to their rights in this matter, and demand recognition and justice, they will receive them as certainly as the leaves fly before the gale. No board dare disregard a just demand backed by any considerable number of the constituents of its members.

I would suggest that each State association appoint a good committee of live, wide-awake bee-keepers to wait on the board controlling the station in their State, show the reasonableness of their demands, and press it with the unction that comes from knowing that one is asking only what is his unquestionable right. Then this action should be supplemented by personal letters from a score or two of the most prominent bee-keepers to each of the board of directors. These will constitute a battering ram that will raze to the ground the most inexcusable indifference, and secure action from the most conservative directors. These letters should be hand-written and personal, not circulars. Of course, this takes work; but so does every undertaking that has in view any really valuable accomplishment.

A third duty, and the most difficult one of all, will be to decide on the right man to do the experimental work. He must be a keen, able man, full of energy, full of the spirit

of genuine honesty, and with natural tact in the direction of experimentation. Good-heartedness, needy circumstances, political affiliations, should all be thrown to the winds. Decide on the very best man in the State, and urge his appointment before the board, with a force and energy that the excellence of the cause warrants, and a startling success will reward the effort.

If there is not a waking up, and a reform all along the line, it will be because bee-keepers are asleep to their own interests. There is not a case on record where any considerable number have appealed for recognition, and demanded earnestly their rights in any such good cause, that success has not crowned the effort. Not always at first, it is true, but the delay is never long. This will be no exception. Bee-keepers will wake up to the importance of this matter; they will demand recognition; the boards will, as they must, concede the justness of the demand; and apiarian stations will then be the rule, and not, as now, the exception.

A. J. COOK.

The foregoing essay was then discussed, as follows:

In reply to a question, Prof. Cook said that Rhode Island, Iowa, Colorado, Michigan and California had experiment stations in apiculture. He thought the Association should put itself on record in regard to this matter. In the White City the display of the bee-keeping industry was not what it should be.

On motion by Jas. A. Green, of Ottawa, Ill., a committee was appointed to draw up a resolution embodying the views of the Association upon the question. Prof. A. J. Cook, Dr. A. B. Mason and Jas. A. Green were appointed as such committee.

The question as to whether less or more bees were being kept, received attention. From the remarks made it seemed that bee-keeping was drifting more into the hands of the specialists, who, owing to better facilities and greater experience, were able to produce honey in larger quantities.

The Convention then adjourned until 2 p. m., when the committee on programme reported, and their report was adopted.

An essay by Mrs. L. C. Axtell, of Roseville, Ill., was then read by Secretary Benton, entitled

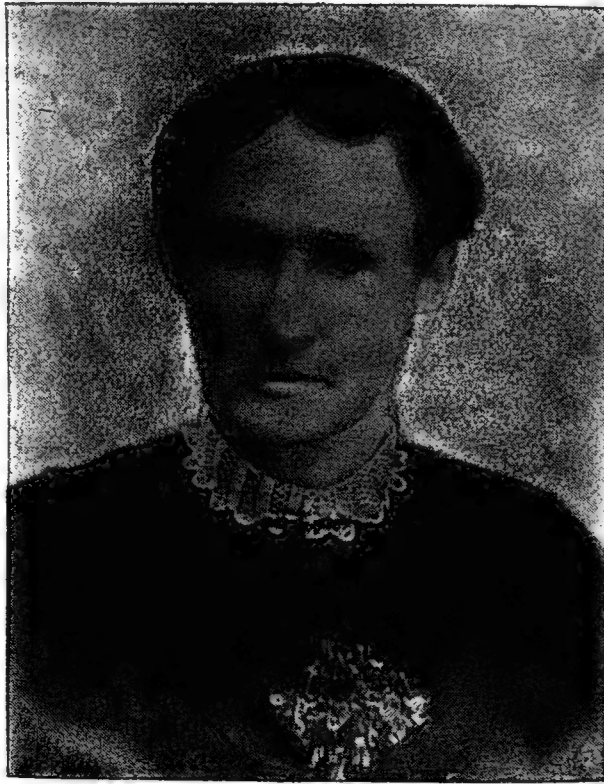
What Experience Has Taught Us the Past Few Years.

Experience has taught us that it would not be wise for us to make bee-keeping a specialty here at our homes in the middle of Western Illinois, but that we must let it remain a side-issue, always aiming, however, to let nothing arise that would cause the bees to be neglected if they should need any especial care, and so arranging our work that the honey can be cared for when it does come; and yet that we may not be idle should there be no surplus honey, but will have some other business by which to make our living meanwhile.

Experience has also taught us that a large brood-chamber pays best in our locality, one season with another, unless we are sure of having time and help to take out combs at the beginning of white clover bloom, so as to crowd the bees into the sections, and to replace them at its close; and we reduce the brood-nest for the winter only in case the combs can be given back in the spring. This taking out combs and returning them at different times of the year from a hundred or several hundred colonies of bees, is what makes bee-keeping very laborious, especially to persons in ill-health, or who already have much work on hand; and if it so happens that we get the brood-nest contracted, and sickness come on, or our help fails us, and we are unable to get the combs given back to the bees, the colonies grow small, and are injured.

Our experience convinces us that when colonies of bees must be left to take care of themselves the season through, they do not do so well with small brood-nests as if given large ones. Mr. Axtell and I would call eight Quinby frames or ten Langstroth frames, a sufficiently large brood-nest.

Another thing we have learned (though a long time in learning it) is, that so long as these poor seasons last it does not pay to try to build up weak colonies by feeding or otherwise, except we have valuable queens which we wish to keep, or except just at the swarming time. When we had our good seasons some years ago, we thought it did pay. Feeding and nursing weak colonies so often causes silent robbing, that when one expects to find he has the colony built up it is still weak and short of stores, and dies the following winter or spring.



MRS. L. C. AXTELL.

And again, we have learned that a good colony with a large brood-nest left alone, neither brood nor honey being drawn from it, will seldom pass a season without getting enough to winter on, will give its owner but little care, will generally supersede its old queen in due time, and can be relied upon to give a good return whenever the weather and the secretion of nectar render such possible.

MRS. L. C. AXTELL.

The essay of Mrs. Axtell was discussed, as follows:

Mr. Wilcox—I think the points in the essay are more particularly applicable to the locality of the writer.

R. L. Taylor—The writer of the essay evidently likes a large brood-chamber on account of the trouble of handling combs. Why not overcome the difficulty by using the Heddon hive?

R. F. Holtermann—I think if experience has taught us anything, it has taught, during the last five or ten years, that we cannot succeed in bee-keeping without devoting time to the business; neither can we expect to succeed without experience.

C. P. Dadant—Colonies that do not swarm for years will supersede their queen as readily as those that do swarm.

A. N. Draper—For comb honey a small hive will do; for extracted honey we want to use a large hive.

R. L. Taylor—What does Mrs. Axtell produce, comb or extracted honey? The general impression appeared to be that she produced comb honey.

Mr. Blanchard—Will the hive which will allow us to give the bees the least attention, be the best, or the hive from which we can get the best results? I think the latter. I know of no business which will give us results—good results—without work.

R. L. Taylor—I think that feeding should be done in the fall of the year. Last spring I examined colonies. I use the New Heddon hive, and at that time, in many instances, I remove one super, leaving the bees a shallow one only. The prospects were bad, yet they increased wonderfully. I put a case of sections on the single story hive, and they gave me as much section honey as those occupying two stories. I fed a ton of sugar in the fall for stores, and I consider it paid me well.

The question-box was then examined, and the first question propounded was about the

Size of Hive for Comb Honey.

It was asked whether a hive with the capacity of an eight or a ten frame Langstroth hive was preferred for comb honey production?

Allen Pringle—I reduce the capacity of my hive by means of dummies when the time comes for the honey-flow. If a 10-frame is a large hive, an 8-frame can hardly be considered a small one, and I reduce to less than 8 frames.

A lengthy discussion followed upon the question as to what would be the best hive for comb honey, some favoring a size equal to an 8-frame Langstroth, and some a 10-frame. Others preferred designs not generally known, amongst them being B. Taylor.

R. L. Taylor favored the New Heddon hive.

The question was then asked, whether the 10-frame Langstroth hive is better than a shallower one for comb honey? The majority favored a smaller one.

Those preferring a 10-frame hive to an 8-frame Langstroth for comb honey were asked to rise, and 16 responded.

Those preferring an 8-frame to the 10-frame were asked to rise, and 42 responded.

One member had changed from an 8-frame to a 10-frame hive; and 24 had changed from the 10-frame to the 8-frame hive.

Twenty-eight members had a hive that would alternate with a capacity of 5, 10, or more Langstroth frames.

J. A. Green thought that the capacity of the average queen was beyond the 10-frame Langstroth hive.

Queen Crowded for Room.

Mr. Blanchard asked if a good bee-keeper would allow a queen to be crowded for room when the bees might be useful for honey-gathering?

R. L. Taylor—The question involved is what she can do in time for the honey-flow. Locality may make a very great difference. This must be considered. In my locality one must be careful not to give too much room for the production of comb honey. If they have not wintered very well,



R. L. TAYLOR, Superintendent of the Michigan Experiment Apiary.

I should not give the bees more than one Heddon hive-body, which has a capacity equal to five Langstroth frames; to this I would add supers. In other words, if they fill to the capacity of five Langstroth frames by June 1st, I would give another; if not until June 15th, I would not give much additional space.

J. A. Green—I would sooner restrict 20 per cent. of my bees for comb than give 75 to 80 per cent. too much room.

Dr. Mason—Mr. Taylor is undoubtedly right, that the locality makes very much difference.

J. M. Hambaugh—I want all the bees I can get for the fall crop, so I want a large brood-chamber.

At this point in the proceedings a short recess was taken, after which President Miller read, in a very entertaining manner, an amusing story about the boy who couldn't tell a lie.

Hon. Eugene Secor, Allen Pringle and C. P. Dadant were then appointed a committee on exhibits; and Dr. Mason, George W. York and O. L. Hershiser were appointed a committee on resolutions.

Foundation for Comb Honey.

R. L. Taylor stated that for the purpose of making tests of different makes, weights and ages of section foundation, he had selected eight of these sorts of foundation, partly light, partly heavy, and one sample two or three years of age. After this foundation was fastened in sections, he put them in cases without separators, alternating them so that in each pair of cases each sort appeared seven times. From one case he took one section of honey made from each sort of foundation, and shaved off the honey so as to leave the septum by itself as complete as possible. These septums he had brought with him, and he desired the committee, if they saw fit, to examine these septums for the purpose of having them determine the comparative thickness of the septum of each sort; the object being to determine if one was more desirable than another.

Father Langstroth Remembered.

A letter was then read from Rev. L. L. Langstroth, by Thomas G. Newman. In this letter Father Langstroth stated that financial difficulties were pressing upon him, freedom from which would probably greatly relieve his physical trouble. He hoped we would have a pleasant Convention.

Mr. Newman, in an eloquent and sympathetic address, said that Father Langstroth's name stood pre-eminently above any other name in the world of bee-keepers. He thought when bee-keepers considered what they owed Father Langstroth, many would come forward and contribute to a fund to assist him in his need.

A collection was then taken up, and a nice purse of \$50 made up.



REV. L. L. LANGSTROTH.

It was suggested that any one not prepared to contribute then, or any one not present, could send their contributions to George W. York, editor of the *American Bee Journal*, who would acknowledge it in the "Langstroth Fund," that was being raised by the *Bee Journal*.

The Syrian Bees.

The question-box was then taken up, and the following question asked:

"Have the Syrian bees any points of superiority over other races?"

R. L. Taylor—*The hinder point.* They are intensely nervous, and must be handled carefully.

Prof. A. J. Cook—I think they have been misunderstood. One must know how to manage them.

R. L. Taylor—I have the same bees that came from the college, and I find them more irritable than my hybrids.

E. T. Abbott—They work well when let alone, but in order to handle them I need all the smokers on the place, rubber gloves and rubber overcoat, and they will even chase me down cellar, and then sit on the outside and wait for me to come out.

J. C. Stewart—I have seen honey produced by these bees, and it has a watery look—something as honey would look if kerosene oil had been poured over it.

Frank Benton—I had the bees in their purity in Beyrout. They have some superior qualities, but are not as good as Cyprians; compared with them they have no superior qualities. They sting badly, and their method of capping honey is not superior. They should be smoked sparingly. Their temperament varies. On an average, they are worse than Italians. With careful selection, they might be bred in the direction of a gentler disposition. They are very prolific; this trait can be regulated. I do not think that a pure Syrian queen-bee could be found on the continent of America to-day.

Distinguishing Carniolan Bees.

“How can Carniolans be distinguished from the ordinary black bees?”

Mr. Benton said that the Carniolans are slightly larger; silvery grey light bands give them a ringed appearance. As to action, they do not run off and drop from the combs. If a veil had to be used in handling them, except in exceptional instances, he would not believe them pure. They are generally gentler than Italians, produce beautiful white cappings, and are very quiet in winter.

Mating Bees in Confinement.

“Has the mating of queens with selected drones in confinement been successfully practiced?” was asked.

A collection was then taken up, and a nice purse of \$50 made up.



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“Has the mating of queens with selected drones in confinement been successfully practiced?” was asked.

Dr. Miller thought not.

Dr. C. V. Riley—I have been deeply interested in this question. I have not yet given up hope that we may be able to solve this problem to our satisfaction, and I think that before long the Department of Agriculture will take this question in hand.

Dr. Miller—I am sure I voice the feelings of the Convention when I say we are pleased that in spite of hope against hope, Dr. Riley feels that something may yet be done in this matter of mating queens in confinement.

Prevention of Swelling from Stings.

“Is there any prevention of severe swelling from bee-stings?” was asked.

Dr. Miller—The best cure is to go on getting stung.

Mrs. Benton—I think that Cuticura is a good remedy.

J. E. Armstrong—I strongly heat the part stung. Put the hand in water as hot as can be borne for ten minutes, or bathe the face with hot water. No swelling occurs. I have tried it often.

Apiary Work and Kind of Frames.

“Who knows anything about injury to back by constant work in the apiary?” Many replied, “*I do.*”

“How many prefer loose hanging frames?” was asked, and forty-nine responded.

“How many have used other than hanging frames?” Twenty-nine responded.

“How many have used partly closed frames?” Nine responded.

Some one asked whether Mr. R. L. Taylor advised that a change be made to closed-end frames?

Mr. Taylor—Yes; as soon as I could conveniently do so.

“How many prefer the New Heddon hive?” Eight responded.

The Convention then adjourned until 7:30 p. m.

FIRST DAY—EVENING SESSION.

After calling to order, the place of holding the next meeting was the first subject taken up, and St. Joseph, Mo., was selected.

The following officers for the ensuing year were then elected:

President—Rev. E. T. Abbott, St. Joseph, Mo.

Vice-President—O. L. Hershisser, Buffalo, N. Y.

Secretary—Frank Benton, Washington, D. C.

Treasurer—George W. York, Chicago, Ill,

Improving the North American.

The Secretary, Mr. Frank Benton, then took in hand the topic, "How can the Usefulness of the North American Bee-Keepers' Association be Improved?"

Mr. Benton lamented that the Association was not representative, but largely local. Each State Association ought to be affiliated with the North American and send delegates. The first step would be to foster State Associations. He stated how foreign associations were managed, told what large numbers were in attendance, and explained an elaborate system by which he hoped that by having exhibitions of honey in connection with the meetings, and charging a small fee for admitting the public, also by charging a small annual fee for each member of all the affiliated societies, money might be secured for the sending of delegates.

Dr. Miller thought the United States was behind every other country in the matter of bee-keepers' societies. He requested Mr. Benton to explain how foreign societies were conducted, at which there was such a large attendance of bee-keepers.

Mr. Benton said there were about four hundred at the Frankfort meeting in Germany. In connection with the convention the society had an exhibition of honey, implements of all kinds, fruit preserved in honey, etc. The society included Austria and Germany. The society received several hundred marks from the Prussian government each year. Mr. Benton showed a beautiful medal which he had received at one of these exhibitions, for honey which he had on display.

Prof. Cook thought the plan would not work here, because the population was not dense enough. Traveling expenses were too high; but he thought the Association had excellent conventions, and there was no reason for feeling discouraged. The bee-papers gave the reports, and were the better for it.

C. P. Dadant agreed with Prof. Cook. Our country is too thinly settled. Mr. Dadant had tried very hard to make the affiliation scheme work when he was Secretary, and one society had not even called for its medals.

Mr. R. F. Holtermann thought the idea a good one, to allow those who were members, but not present, to vote. It would create greater interest.

R. L. Taylor agreed with Prof. Cook. In the old country those going had other objects in view. He thought there were insurmountable difficulties in connection with allowing those absent to vote.

The Convention then adjourned until 9 o'clock a. m. the next day.

SECOND DAY—MORNING SESSION.

The Convention was called to order by the President, and Mr. R. F. Holtermann, of Brantford, Ont., editor of the *Canadian Bee Journal*, read the following essay, entitled

The Production of Comb Honey.

The production of a first class article of comb honey becomes a subject of greater importance from year to year. The demand for comb honey is increasing, and those producing the article in the best condition will secure the best



R. F. HOLTERMANN.

prices and readiest sales. There is no use in treating the subject except in detail. There are a number of points to be considered.

First of all, is the man fitted? No man who is not thorough in his work, neat, intelligent, paying attention to detail, can succeed to the fullest extent. It is, then, a subject worthy of the attention of a man or woman of first-class ability.

The locality must be considered. One in a locality generally poor cannot expect to compete in the production of comb honey with a bee-keeper in a good locality; by that I mean, heavy honey-flows are required rather than prolonged ones. The greater number of pounds of honey gathered in the least time, the better for the production of comb honey. Upon this we are all agreed.

THE HIVE REQUIRED.

Upon this subject I hardly consider it wise to more than touch. There is such a diversity of opinion, that every one must judge for himself, according to conditions. At the same time, I cannot treat the subject honestly and conscientiously without stating that I consider any material variation from the depth of the Langstroth frame a mistake.

THE SUPER CONSIDERED.

There is perhaps no super that will give us all advantages and no disadvantages. We must then select the one which has the greatest number of advantages, and the least number of disadvantages. I should like a super that would protect the four sides of the sections, also its edges, as far as possible; but when we consider the difficulty—in fact, impossibility—of getting at sections, the conclusion is forced upon us, that something else must be looked for. The section supers with a section-holder consisting of two sides and a bottom-bar, with separators, follower and wedge, is probably the super we are looking for, as it is not covered by a patent, and every one is at liberty to make and use it. The sections are protected as far as convenience in handling permits.

THE SIZE OF SECTION.

The size of section must be the next consideration. In this we must keep in view convenience, demands of the market, and what the supply dealer makes; when we do this, but few will fail to take the $4\frac{1}{4} \times 4\frac{1}{4}$ section. To decide upon the width is a more difficult matter. In Canada 95 out of every 100 use the $1\frac{5}{8}$ section; a few use 7-to-the-foot; the balance, $1\frac{3}{8}$, $1\frac{3}{4}$, $1\frac{1}{2}$, $1\frac{7}{8}$, and 2 inches. The demand is for the



ALLEN PRINGLE,
Superintendent of the Ontario Apiarian Exhibit at the World's Fair.

narrower section— $1\frac{5}{8}$ or 7-to-the-foot. In the United States, I believe I am safe in saying the demand is increasing for a narrower section—something more in the direction of what Canadians are using, and that demand will be met.

THE KIND OF BEES.

Next comes the bees. Upon this it is my intention here to touch very briefly, as the subject comes up under "General Management." Just let me say, that beauty of comb, honey-gathering qualities, and the like, must be looked to, rather than the beauty of the bee. I believe many of our queen-breeders are bowing too much to popular opinion in the breeding of queens. They know that a beautiful queen and beautiful bees will please as soon as the eyes rest upon them. We are apt to be carried away with them the moment we open the cage, while it takes time to manifest other and more practical characteristics.

THE PROPER MANAGEMENT.

And now comes management. The bees should have plenty of stores in the fall of the year, they must be wintered well, and every hive should have plenty of stores, so that the bees in the spring need never curtail brood-rearing on account of shortage of stores. All that applies to the building up of colonies in the spring applies to the successful production of comb honey.

I take issue with the statement that the bees can get strong too early. Such a condition never was, and never will be; the opposite, too weak colonies at the honey-flow, alas, is too nearly the rule, and reduces the number of pounds of honey secured per colony.

If a colony gets crowded in the lower story, and the time has not arrived when sections should be put on, I place on an extracting super with a queen excluder, or without, as I see fit, and at the proper time replace this with comb honey supers. With extracting supers on the hive, there is at this season practically no excuse for swarming.

All hives should be placed on secure stands, and in every case a spirit level used. There is no serious objection to the hives leaning forward a trifle, sufficient to shed rain, but sidewise they must be perfectly level. The greatest cleanliness should be observed, bottom-boards, hives and top-bars

scraped, and only such old colonies as have bright, clean combs run for comb honey.

Full sheets of foundation should be used in the sections, and the foundation as light as possible, and of the best wax. I prefer wax made from cappings, and taken by the solar wax-extractor for this purpose, but in this matter the supply dealer is at the mercy of the bee-keeper, and it rests with the latter what kind of wax shall be used.

When I make the statement that light foundation should be used, I am at variance with some leading comb honey men; but while it is a fact that the bees will thin down the foundation, there are seasons and times when they will not do this, and against this we must guard in order to avoid making the article unpopular.

I use a bait (one of last year's sections) in the supers. I have also tried supers without, but can find no great difference.

Swarming is an important factor in the production of comb honey, and the longer one works for this the more confident one must feel. No one who wishes to produce comb honey to perfection, will ever care for any advice to prevent swarming entirely. No apiary should be run for comb honey alone, and in running for comb honey the only object kept in view should be the production to perfection of this article. To do this, swarming must take place. From clean parent colonies good comb honey may be secured, but rarely as good as from swarms,

When the bees swarm they should be hived on the old stands, and either on very narrow strips of foundation, about half an inch deep, or on full sheets. Localities undoubtedly vary as to the amount of pollen deposited in the combs, and in a locality in which the bees gather an undue amount of pollen, I should say, try to make the bees draw out and fasten to frames of foundation early in the season, and hive the bees upon these combs; failing in this, use full sheets of foundation. The object of using these full sheets, or combs, is to assist in preventing pollen from being in the sections.

In localities where pollen is not troublesome, the bees should be hived on starters, and after allowing one complete day to pass after the time of hiving, put the supers on the hive. I have not much faith in added energy through swarming, but the bees have at the commencement no brood to care for and feed, and they give better results as to surplus. If sections on some old colony are about ready, it is a good plan to give these to swarms to finish; they will make very rapid work in finishing them.

Now as to the combs which will be built from the starters: We know that when a young queen is in the hive, the bees will be less inclined to build drone-comb, but is this condition practical for the comb-honey producer? I think not. The plan of re-queening with young queens before the honey-flow, is not desirable, from the loss of time resulting from the introduction of a new queen and taking out of the old one. The truly successful comb-honey producer must be ever on the watch to improve his stock in this direction; he should know by numbers what supers have been finished by every colony, and when he notices section supers of well capped comb, and free from brace-comb and propolis (this latter characteristic should be especially observed), he should note that hive, especially if the amount of honey secured has been large. Next season he should breed from such a queen, and so on, producing from year to year a better strain of bees.

I am not saying a word against queen-breeders (I am a queen-breeder myself), but a comb-honey producer should have a strain of bees which, although they may not be the best in the world, yet must be of sufficient value to him to cause him to replace them with extreme caution, and only with something tried by himself. To prevent deterioration, some new blood must be introduced each season; it is then impractical to have young queens with swarms, and often with such queens there will be an undesirable amount of drone-comb. I have within the last two weeks seen the result of an extensive experiment conducted by Mr. S. T. Pettit, of Belmont, Ont., under the following directions:

The swarms were given one or two combs entirely drone, the balance starters, with the hope that the bees would be furnished with worker-comb, but they appear to have no powers of reason, and in every instance appear to build as much drone-comb as if the first combs had never been given.



PRESIDENT E. T. ABBOTT.

For extracted honey I favor full sheets of foundation, every time, but for comb honey my arguments for starters, unless in exceptional cases, are these: We are trying to get the most honey out of these bees, and we want the best product; if we do not care for much increase, we can shake the bees from these combs after the season is over and destroy them; if we wish to winter them we can put them on good combs, and feed them sugar syrup for winter stores. The combs built by the bees can be patched up to the best advantage, and the old hive placed directly behind. The new colony can be treated thus:

Almost six days after swarming shake a good many bees from the combs, adding them to the new swarms in front, and either utilize the combs in another place, or put the colonies on new stands, and let them build up for winter. I am never troubled with second swarms.

The location of an apiary has much to do with swarming. In places where the air can freely circulate, the amount of swarming will be reduced; the nature of the soil even will have an influence. I like the apiary on sod, and the hives to be placed under the outer edges of the shade trees.

I never give, in the production of comb honey, an upward ventilation, and herein lies an important secret towards securing white and clean sections. The bees resent any such current of air, and when given, begin to propolize, and soiled sections are a result. A quilt should not be used unless a heavy cushion and a heavy lid be placed above to prevent the bees from pushing the quilt off. I like a honey-board, and a quarter-inch bee space above the combs. Shade-boards are used on top, and even at the sides of hives; they are a great advantage.

It is unnecessary to say that no one can engage in the successful production of comb honey with one super only, and yet there are many who think such is a practical economy. Before the advent of the bee-escape, I drove bees out of the comb-honey supers by spreading over a cloth dipped in a weak solution of carbolic acid, the cloth being wrung almost dry before spreading. This works very well; but the bee-escape is still better.

My system is to produce a certain amount of comb honey, and as the season becomes doubtful turn off to extracted honey; this prevents cull sections except in very exceptional seasons.

Nothing has been said about any kind of feeding. To feed back extracted honey means to put upon the market comb honey which will quickly granulate, and this will displease the consumer, and is therefore undesirable. To feed anything else should never for a moment be listened to—

never be even thought of; to practice it would surely bring swift retribution. Only a choice article should be aimed at, even if we never exhibit, for by so doing we place ourselves, to a certain extent, out of reach of competition. We command the highest price and a ready sale.

R. F. HOLTERMANN.

The foregoing essay was then discussed, as follows:

R. L. Taylor—Why do you favor starters for comb honey?

Mr. Holtermann—Because I look for the best results, financial. The most honey in the best shape. The starters will give me the best financial results.

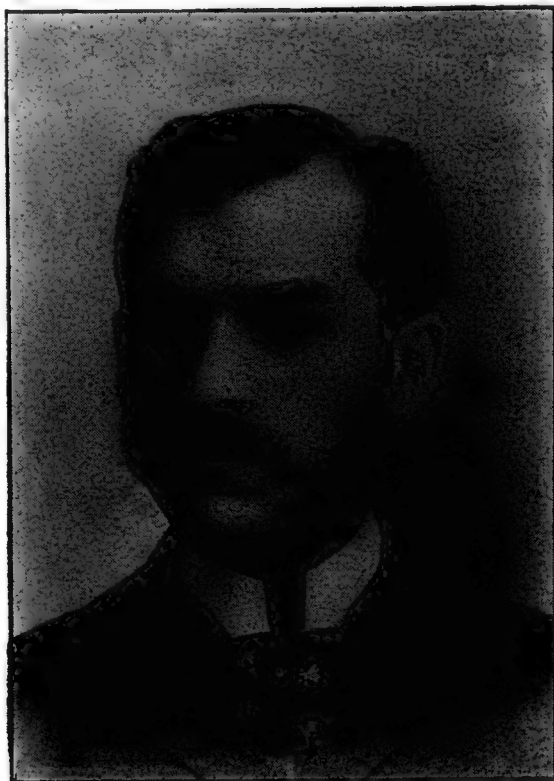
R. L. Taylor—I do not think we want to use starters for comb honey. I this summer hived four colonies on foundation, four on combs, and four on starters; everything was weighed—bees, hives and all. The bees were hived the last week in June; the honey-flow lasted for about three weeks, and on July 19th results were taken. The swarms differed in weight, so the gain per pound was taken during that time; at the latter part of the season those on starters were gaining more than the others. As to upward ventilation, I favor such and practice it.

R. F. Holtermann—Before I say anything more, I wish it understood that I value the work of Mr. Taylor very much, and I may be mistaken about the value of starters, yet too much value cannot be attached to one experiment; but as it is repeated, and the average is taken for a series of years, does great value arise. In the first place, the results as to yield per colony differ very much in different weights of swarms. For instance, a swarm up to a certain weight is engaged in keeping up its present weight, the bees beyond that weight give the increase, hence the increase per weight of bees is, I think, hardly just. Again, we know colonies apparently alike give very different results.

Mr. Taylor—In each group there was one swarm weighing alike.

Mr. Kretchmer—The length of the honey-flow makes a great difference; if short, starters pay best; if long, the contrary.

N. D. West—I agree with the views of the last speaker. I used to favor starters. If the season is full and short, we first send the honey up into the surplus boxes. I hive swarms now on five frames. The bees must go above with the honey. I have between 400 and 500 colonies.



TREASURER GEORGE W. YORK, Editor American Bee Journal.

Mr. Stewart—If I had lots of time I would use dummies. I used to favor starters. When I put on supers I take sections off of the parent colony, whether partially worked out or not.

Mr. Holtermann—I might say that I never have any fall flow.

Mr. Abbott—I have been interested in these discussions, but I do not think it is of any use splitting hairs when estimating results. The bees themselves give very different results. Of course, no one asks bee-keepers to take the result of one experiment as final.

A number of members spoke of the value of the work done by Mr. R. L. Taylor, and a strong feeling prevailed that more should be done in this direction.

The following resolution was then presented, and passed:

Resolved, That the North American Bee-keepers' Association recognizes the value of experiments and experiment stations, and firmly believes that bee-keeping would be greatly aided in each State and Province, where bee-keeping is a leading or important industry, if the experiment stations in each State and Province should secure an able apiarist to give his full time and energies to the work of experimentation, and if these apiarists should work together to advance the general apiarian interests.

Therefore, we ask that the bee-keepers in all such States urge the importance of this matter before the directors of the stations, and ask such action as will secure the services of an apiarist in each station. And cease not to urge until success is secured.

A. J. COOK,
DR. A. B. MASON,
JAS. A. GREEN,
Committee.

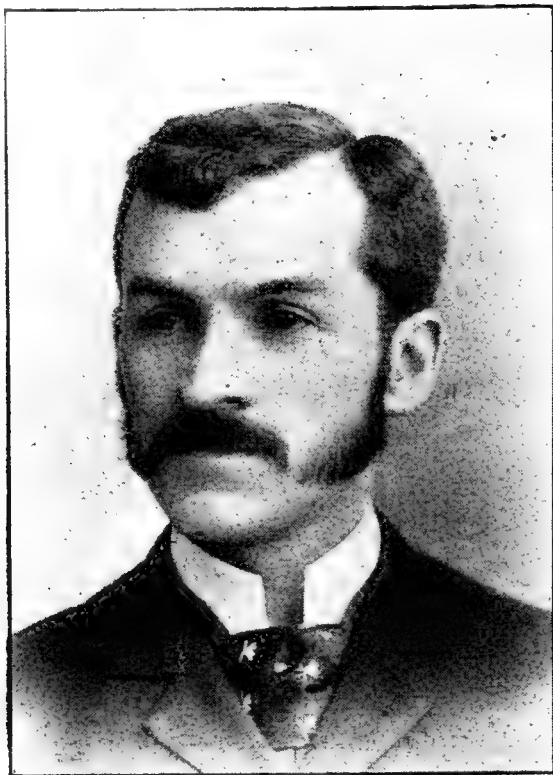
At this time, Mr. J. W. Pender, of West Maitland, Australia, being asked to give some information about Australia, delivered an interesting address. In substance, he spoke as follows:

The Keeping of Bees in Australia.

"I am not a public speaker, but will give a few facts which may interest you, but first allow me to convey to you the hearty greetings of the bee-keepers of New South Wales. I represent the Hunter River Bee-Keepers' Association. It

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is the only one doing any good in apicultural work. The fee is sixty cents. Our object is to try to introduce the new system of keeping bees; the old gin-case system has been in vogue. Much work has been done by the association. The Berlepsch hive was much in use, but the American system has been introduced, and is becoming popular. The Langstroth hive is now mostly used.

"We have a fine country for the production of honey. For nine months in the year we get honey from the bees. There is no truth in the statement that bees, knowing they can gather honey almost the entire year, store no surplus and remain idle.

"We have many black bees, but we are introducing the Italian. We find them better workers and more docile. At one time no bees could be mailed, but now, owing to the efforts of my son, W. S. Pender, and other members of our association, they permit queens to pass through the mails. We get queens from America and Italy.

"The sources of honey are white clover, alfalfa or lucerne (alfalfa grows luxuriantly; it is the chief fodder-plant for hay making, which our farmers crop six times in the season), fruit and flower blossoms, and a great variety of gum trees, almost all of which bear flowers well supplied with honey in favorable seasons, giving a continuous supply of honey. On account of the hot country, and difficulty in transporting, we produce mostly extracted honey. Our honey is of good quality. We attempt to grade it. We get an average of 224 pounds to the colony, spring count, during a favorable season. To give a few instances of yields, 17 colonies (Mr. M. Scobie's at Bishop's Bridge), increased to 90, producing 7,000 pounds of extracted honey in twelve months. Most of the honey is taken in May and June.

"The apiary of Patten Binni took 7,000 pounds from 30 colonies, that is, from the old colonies, besides the increase and the honey they produced. My own, Drumfin, apiary of 40 colonies, which I sent to an out-apiary shortly before leaving Australia, yielded in fourteen days 16 60-pound tin

cans of honey. A letter received from my son later stated that they had produced since 3,700 pounds, and in another two weeks he expects to take 2,000 pounds more.

"The wholesale price of our honey is 8 cents per pound. We have been trying to find a market in London, England. What they want there is a honey with no pronounced flavor, as the bulk of ours has.

"In New South Wales we have a meeting of bee-keepers every four weeks at night. Bee-keepers ride in from long distances to attend these gatherings. I think the American system of bee-keeping best for our country."

J. W. PENDER.

At the close of his remarks, on motion of Dr. Mason, Mr. Pender was elected an honorary member of the Association, and received a badge.

Fixed Spacing—Brace and Burr Combs.

Fixed spacing, and the building of brace and combs, was then taken up for discussion.

R. L. Taylor thought he would not care if he had a few burr-combs.

The question being asked, nine agreed with Mr. Taylor in his views.

A large number objected to these combs, the opinion being that they could be largely avoided by means of thick top-bars.

Mr. Taylor asked if it was desirable at the expense of distance—by putting in a heavy top-bar—to do away with a heavy top-bar; thirty-three voted to so do away with these combs.

E. R. Root thought the added labor, owing to brace and burr combs, was too expensive.

R. L. Taylor thought it depended upon whether one handled hives or frames; if frames were handled much, they

should be free from these combs. Queen-breeders would object to them, as they were given to handling combs in the brood-chamber.

A discussion at some length followed on **V**-shaped top-bars, and some claimed that such top-bars lead the bees to building comb over the top-bar.

E. J. Baxter favored frequent handling of combs; he could by that method obtain better results.

In reply to a question, Mr. Taylor said he had used thick and thin top-bars; with the former there were less burr and brace combs. He, however, objected to the loss of space.

This question was then asked by President Miller; "How many think that any kind of honey-board is necessary between top-bars and sections?" Thirty-nine thought one necessary, and fifty-seven thought otherwise.

Mr. Pringle—A good many bee-keepers use a sheet of perforated metal for an excluder.

Dr. Miller stated that a great change had taken place on the above question. A number of years ago James Heddon had made the statement in convention that when a brick was thrown up and it never came down, then bee-keepers would dispense with a honey-board for the production of comb honey. This appeared at that time to be the general view of other members.

SECOND DAY—AFTERNOON SESSION.

For the purpose of aiding digestion, President Miller read a funny story. It was about a Dutchman. The Doctor looked, talked and acted like a Dutchman, and appeared to please everybody.

Although all members were not in the room, those from the various States and Provinces were grouped with the following result:

California.....	2	Ontario	14
Colorado.....	4	Quebec	1
Illinois	43	Maryland	2
Iowa	23	Michigan	20
Indiana.....	6	New Hampshire....	1
Kansas	1	Minnesota.....	5
Kentucky.....	2	Missouri	4
Nebraska	2	Vermont	5
New York	15	Texas.....	2
Ohio	30	Dist. of Columbia...	6
Pennsylvania.....	3	Australia ..	1
Wisconsin ..	9	Chicago.....	8

It was then moved by Mr. Cutting, and seconded by Mr. York, that a committee of three be appointed to revise the report which was being taken of the proceedings, and that the President appoint the committee. The motion was carried by a large majority, and the President appointed Mr H. D. Cutting, Hon. Eugene Secor, and Dr. A. B. Mason. The same committee were given authority to pay George W. York a proper sum for publishing the report in pamphlet form, as heretofore, each member to receive a copy of the report free of charge.

The discussion on burr and brace combs was then continued.

Jacob Alpaugh—I prevent these combs largely by a proper bee-space, that being $\frac{1}{4}$ of an inch. Nothing will prevent them entirely. Twenty-one had succeeded in the manner that Mr. Alpaugh had pointed out.

Mr. Wheeler—The width or thickness, or both, has to do with it. A wide top-bar $1\frac{1}{2}$ wide by $\frac{3}{8}$ -inch thick will answer, with $\frac{1}{4}$ -inch space.

N. D. West—Of late I have spaced $1\frac{3}{8}$ flush from center to center. I now use a top-bar 1-16x $\frac{3}{8}$ -inch, and $\frac{1}{4}$ -inch between the top and the lower story. The length of frame will influence the necessary depth of top-bar. If we get brace-combs we are more liable to burr-combs.

Dr. Miller thought $\frac{1}{2}$ to $\frac{1}{8}$ inch meant all the difference between brace-combs and no brace-combs.

E. R. Root said, in reply to a question from Mr. Muth that he thought brace and burr combs could be prevented almost entirely. He was inclined to think that the thickness of the top-bar, irrespective of sufficient strength, had something to do with brace and burr combs.

H. R. Boardmen—Close spacing only partially prevents brace and burr combs.

N. D. West—We should be careful to have combs in the center of the frames, and perfectly true in the frames.

The General Manager of the National Bee-Keepers' Union, Thomas G. Newman, then delivered the following address, entitled

National Bee-Keepers' Union; Its Scope and Legitimate Work.

At the last election of officers for the Union, amendments to the constitution were adopted, which allow the Union to exert its influence and devote its resources "for any purposes in the interest of the pursuit of bee-culture, when such are approved by the Advisory Board."

This amendment defines "the scope" of the Union most fully. Its powers are circumscribed only by its available funds, and the "interests of the pursuit."

It remains with the Advisory Board to determine "its legitimate work." But that board should always "feel the pulse" of bee-keepers generally, remain within the limits of the work sanctioned, and thus "keep in touch" with the spirit of "the ever-living present"—the times in which we live.

Prominent among the later suggestions as to a field of operation, in addition to the defense of the pursuit of bee-keeping when assailed by the ignorant and prejudiced, is that the Union should assume the aggressive, and prosecute adulterators of honey.

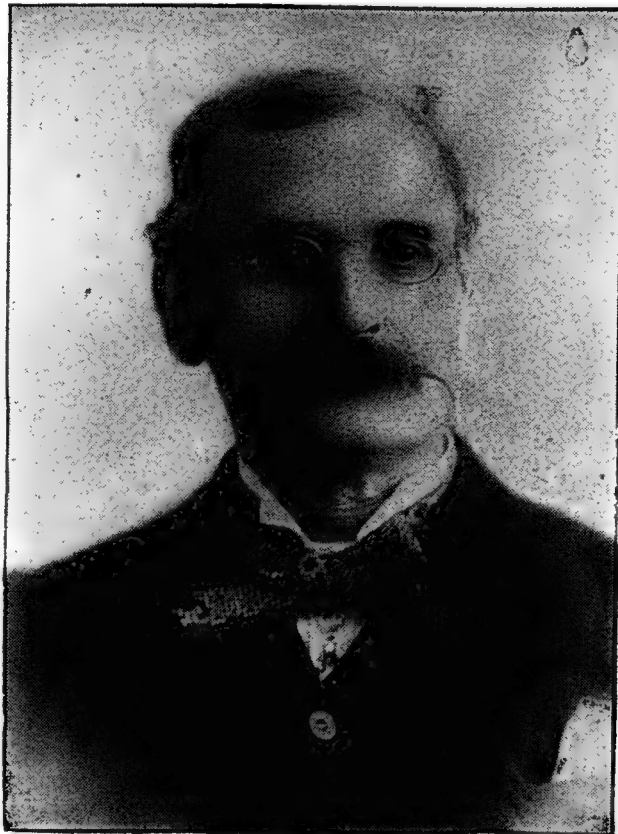
Much as we may approve this sentiment, it must be admitted that there are difficulties to be encountered because of the diversity of the laws of the several States. What is needed most, is a general law enacted by the National Congress of the United States against the adulteration of all kinds of food, applicable alike to every State and Territory. Then something may be accomplished in that line which will be beneficial. Until that is done I fear that we shall "labor in vain," except, perhaps, in isolated instances.

Another difficulty is that the analyzation of honey by chemists of even national reputation cannot always be relied upon for proof of sophistication. This has been proven by many samples of absolutely pure honey having been by them pronounced "probably adulterated." The reason for much of this confusion probably lies in the fact that the honey from localities varies in consequence of the diversity of soil, climate and atmospheric conditions.

I am glad to notice that the professors themselves are endeavoring to overcome these difficulties by attaining more definiteness in this matter. We must await their further investigations, and the adoption of a test that will be "infallible," before we risk the money of the Union on the prosecution of the scoundrels who practice the adulteration of our sweet product.

Another phase of legitimate work for the Union is to make its influence felt in legislative halls—in preventing unjust enactments, which are sought in the interests of rival

pursuits, or those who are ignorant of the advantageous service of the honey-bee in the economy of nature. In this line the Union has already done noble service, but that is capable of much enlargement.



THOMAS G. NEWMAN.
General Manager National Bee-Keepers' Union.

Test cases in every State, where suits against bee-keepers for maintaining a "nuisance," are desirable, and these can only be obtained in an organization like the Union, for the costs would be too much for individual efforts in that line.

The "moral effect" of the existence of the Union is something wonderful. Lawyers, judges, juries, as well as quarrelsome neighbors, are all influenced by the fact that there is an organization ready and able to defend the pursuit against injustice and maliciousness. The strength of a body corporate is wonderful when it is exerted in the defense of a righteous cause.

Organization is the "one thing needful" to-day. Apiarists must learn to act with and for each other. Then they can make their influence *felt*. Then they can secure "their rights," and command respect at all times and under all circumstances.

In an existence of only eight years, the National Bee-Keepers' Union has gained victories to be proud of. It has compelled the courts of the land to render just and fair decisions in cases where the keeping of bees were involved, and has won from the highest courts precedents which will be pointed to as long as "law and order" shall endure. Cases are now common where judges "refuse to interfere with a business which the courts recognize as legal"—that is, the keeping of bees.

In preventing trouble, the Union is just as successful as it is with a case in court. It is always on the alert, with well-directed guns, and "keeps its powder dry."

The National Bee-Keepers' Union is now under the fostering care of the North American Bee-Keepers' Association, and I trust that it will endure for "the ages to come," and will bless all coming generations. We must not take the selfish view that as individuals we are safe from annoyance, and may never require its services in our own behalf. We should consider that we are building for posterity, and rearing a "tower of defense" which shall last long enough to be used by our children's children.

The Union's "Legitimate Work" is to follow in the line already marked out, and to grapple with any foe which may hereafter present itself, forming a "place of refuge" for the unborn millions of the twentieth century of the Christian era.

The Bee-Keepers' Union has already won a glorious record in the defense of apiarian interests. It is true its numbers are not as numerous as they should be, but the organization has made itself felt in every State or Territory, either directly or indirectly. If this has been done with a few hundreds, what might be done with several thousands? If a small company of "soldiers" have thus caused the rights

of the pursuit to be everywhere respected, what may be accomplished by "an army" equipped for war?

Rise! for the day is passing;
While you are dreaming on
The others have buckled their armor,
And forth to the fight are gone.
A place in the ranks awaits you,
Each man has some part to play—
The past and the future are nothing
In the face of the stern to-day.

Stay not to sharpen your weapons,
Or the hour will strike at last,
When from dreams of a coming battle
You may wake to find it past.
Your future has deeds of glory,
Of honor, God grant it may!
But your arm will never be stronger,
Or the need so great as to-day.

THOMAS G. NEWMAN.

Chicago, Ill., October 5, 1893.

The Adulteration of Honey.

Prof. H. W. Wiley was then called upon. He said the great points of success were the production and the marketing of honey. Without these, financial success would not come. Some undoubtedly kept bees for pleasure, but the majority could not be found in the bee-keeping ranks unless there was profit in the business. He was anxious to help bee-keepers in their market, but by adulteration bee-keepers had been cheated out of fully half the market for honey. There was at present no way of telling pure honey by chemical tests. He regarded pure honey as honey gathered from flowers and stored by them. If sugar were fed to bees with a proportion of sugar invert, it would be difficult to detect the fraud. A method not practiced in America, but in Europe, was to artificially invert sugar and mix it with an artificial article. With such samples as mentioned, he would hesitate to pronounce. Again, in the exudation from plant-lice, he had pronounced such as unadulterated. It was his

intention to pursue this problem, and he thought they would be able to solve these problems and detect adulteration. He wanted the association to know that he was anxious to help bee-keepers.

In reply to a question, Dr. Wiley said he had purchased his samples of extracted honey from stores. The bulk of impure honey had been put up by packers; some, however, had the labels of bee-keepers on the packages. He thought bee-keepers should see that no one counterfeited their labels. The subject came of finding a package of honey impure, with the name of Charles F. Muth & Son on it.

E. R. Root said that there were packages of honey with Mr. Muth's name on which did not read as the genuine



E. R. ROOT.

labels did; some one was therefore practicing adulteration. The impression was that no one believed that Mr. Muth adulterated honey. In fact, Mr. Muth's well-earned reputation placed him above suspicion.

Dr. Mason laughingly remarked that he thought in Mr. Muth's case Dr. Wiley was a little mistaken, and that bee-keepers didn't have much confidence in his statements.

Mr. Muth—One label mentioned in Dr. Wiley's report did not read as my labels read at all.

E. R. Root—If this fraud has been practiced in one case, it is altogether likely it has in other cases.

Mr. Muth said his friends knew very well that he never adulterated honey. He told about a customer to whom he had been sending a carload of honey every four or five weeks for several years with entire satisfaction. After Prof. Wiley's report came out, that some of his honey had been adulterated, his customer wrote that this time the honey was not satisfactory, and he would have an analysis made at once. To this Mr. Muth had no objection, only he was afraid that he would send the samples to Dr. Wiley, in which case he had no doubt that he would have found them adulterated also. Fortunately, however, they were sent to a chemist in Pittsburg, who found them to be strictly pure.

Dr. Wiley thought, in his case, the goods had doubtless been counterfeited, and instanced such a case in canned goods.

A recess was taken at this time, and after again calling to order, Dr. Mason stated that during the recess Prof. Wiley had requested him to invite the members of the convention to call on him in the northwest corner of the Government Building, where he had charge of a chemical laboratory.

Mr. Benton then read an essay by Mr. Samuel Simmins, of Seaford, England, as follows:

Swarming, and the Prevention of Swarms.

The causes of swarming can be traced to several sources. First of all, we must consider it a natural instinct of preservation whereby young queens are secured, new homes are formed, and the bees fulfill the supreme command, "Go forth, increase and replenish the earth."

Next, the conditions of locality, the honey seasons and resources have much to do with the act of swarming.

But when we come to the action of man in relation to swarming, we find the foremost reason why bees are allowed to carry out to the full this natural disposition of theirs is negligence. Let them have irregular brood-combs, with plenty of pop-holes, and queen-cells are constructed where otherwise none would have been found. Then allow the brood-nest to be crowded—not necessarily with bees or brood—with too large a proportion of the combs choked with honey, and pollen in particular, then the queen is conducted to a new site, and another colony is established. In this connection, too, the negligent bee-keeper is sure to be careless as to the removal of his aged queens, and he suffers in more than one way in consequence.

On the other hand, we have a more careful and far-seeing class of bee-keepers, and what is it they do towards

PREVENTION OF SWARMING?

The usual process, where comb honey is being worked for, is to put on the sections before the swarming condition is reached, thus giving room in advance of the bees' requirements; but this is only partially successful; the brood-nest becomes crowded with both brood and pollen, and a great many swarms issue. Therefore, as a farther aid to prevention while working for

COMB HONEY,

will the bee-keeper be compelled to relieve the brood-chamber with the extractor? Oh, no, that will not remove the pollen; but by occasionally withdrawing the two outer combs, and at the same time inserting near the center two frames with guides only. Mind, these two frames are not to have empty combs or foundation, or they may be choked up at once to the exclusion of the queen.

PREVENTION WITH EXTRACTED HONEY

has generally been a far more simple matter where the bee-keeper will only keep on hand plenty of empty combs and extra sets of hive-chambers that can be tiered up freely when the good time comes. The brood-nest is not cramped, and the bees are never allowed to have all the combs completely capped before the honey extractor relieves the surplus combs of their accumulating stores.

But, after all, prevention is not always secured with such an unlimited space. For one reason most bee-keepers keep queens until they are too old, and worse than that, such as are reared at quite the wrong time of year to insure the best results.

Young queens will top all that has been urged so far as aids to prevention of swarming, though as a matter of fact such queens will always be found at the head of far stronger and more capable colonies than any with ordinary swarming queens.

The young queens should be reared in nuclei towards the latter part of the season, by the side of the respective colonies, and united to them before the general clearing up, or where you expect a later harvest, shortly before that occurs. Try it once, you follow it always.

But above all, and in connection with the last named condition, the

FOREMOST METHOD OF PREVENTION

it has been my lot to discover, is the placing of an empty chamber *under* the usual brood-chamber before the latter becomes crowded. The frames of this lower chamber have $\frac{1}{4}$ inch guides only. The surplus is worked as usual above the brood chamber, when no combs are completed below, even if left without attention the whole season, provided the former receive due care. There are no traps and no constant shifting of heavy weights; the bees feel that their brood-combs are never complete, and the natural desire for swarming is lost.

Before the plan is tried, the frequent query is, "How can I possibly get the bees to work in the surplus chamber with so much room below?" I have never found the least difficulty. When working for extracted honey, with plenty of combs above, there can be no difficulty. And when is there anything in the way of bees going up into the sections? Only when you do not use full sheets of foundation in those sections; and who in these days can afford to use anything less than full sheets? If you use only

STARTERS IN THE SECTIONS,

then the combs are finished off with drone-cells in many cases, with its coarse, irregular cappings. The drone-comb there has been the only inducement for the queens to go up and breed among the nice combs of honey; then some of you felt that you must use the queen-excluder zinc, with its added expense and inconvenience.

Use nothing but full sheets of foundation in the sections; give empty frames below the brood-chamber, and you will find perforated zinc one of the biggest shams ever put into a bee-hive.

NATURAL VS. ARTIFICIAL SWARMING.

We next come to the question "whether it is advisable to prevent natural swarming in all cases." Decidedly, yes. It is opposed to all the first principles of scientific breeding, and in northern latitudes we do not want our queens reared at the usual swarming time, as already shown. We want at all times to keep our bees so well in hand that we can make our increase at the time it is going to interfere the least with the main work of honey gathering; and we just want every single queen reared and mated by selection.

In southern latitudes I should still want to control the swarming impulse; but whereas in the North but limited increase is desirable, in tropical and semi-tropical climates, the highest results only are obtained by swarming (dividing).

It is impossible in the latter case to keep up a sufficiently large and continued working population to secure the enormous amount of honey generally abounding throughout a lengthened season, without a judicious process of increasing, which shall do away with the pollen-bound combs while allowing the queen unlimited space in newly-built cells.

Old queens, with much drone-comb built in consequence, and an excess of pollen, have much to do with the meagre results reported from some of the lands enjoying almost continuous sunshine, and where a boundless wealth of bloom would lead us to expect a harvest of ten times the quantity.

In conclusion, I would repeat the necessity of so working, without at all disturbing the economy of the hive, that the desire to swarm does not exist, making increase when desirable by division as the most profitable method to follow. Use only young queens reared in autumn. Allow plenty of room under the brood-nest, which, being also a cause of better ventilation, permits of more continuous work being carried on, and at the same time does away with continual shifting of heavy weights as well as useless clap-traps.

SAMUEL SIMMINS.

Mr. Simmins' essay was then discussed as follows:

Mr. Boardman—Some years ago I wanted to prevent swarming; now I do not. When I wish to prevent swarming, I shake the bees out of the hive upon empty comb. If I want no increase, after the surplus honey has been taken, I return the bees to the colony with the young queen.

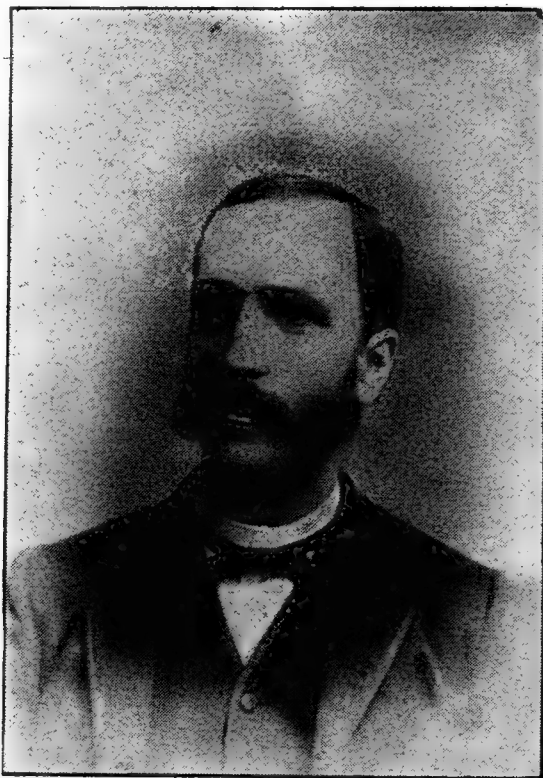
At this stage Mrs. Mason entered, and calling for Dr. Mason, said that Mr. Newman was very ill in the outer hall. Dr. and Mrs. Mason, Dr. Besse, C. E. Parks and Mr. and Mrs. York went out to care for Mr. Newman.

In a few minutes Dr. Mason returned and said that Mr. Newman was feeling better. On motion of the doctor, it was voted that the association tender Mr. Newman their heartfelt sympathy in his affliction, and wish him a speedy return to health.

Swarming and the Production of Comb Honey.

This question was then asked: "For the best results in comb honey, is it desirable to prevent swarming?" Thirty-one favored prevention and forty-two did not.

Byron Walker—I think the season has much to do with it, whether it is best to prevent swarming. If the season is short, I want to prevent swarming.



W. Z. HUTCHINSON, Editor *Bee-Keepers' Review*.

Mr. Boardman—I have had a hive on a scale, and it gained about five pounds per day. After swarming, another gained ten, nine and eight pounds. I think they were equal in strength.

R. C. Aikin—I have favored for years a system to control swarming. In a term of five years I would compete with the best man in the convention, and he practicing swarming and I non-swarming, and I would secure better

results than he would. There was a great deal of deception in the idea of bees gathering more honey after swarming.

Extracted Honey Production and Swarming.

"Is it desirable to prevent swarming in the production of extracted honey?" In reply to this question, forty-nine favored non-swarming and two favored swarming.

Mr. Crane—Circumstances very much alter cases. The length of the season made the difference. He had several hundred colonies—had four yards with only two to manage them. This season was short, and to divide forces was not advisable. The largest colonies generally gave the best results.

Mr. Kretchmer asked Mr. Boardman if the additional hives and labor would be paid for in increased honey.

Mr. Boardman—I can comprehend conditions under which such would be the case. In reply to another question, he said that he put his swarms on the old stand.

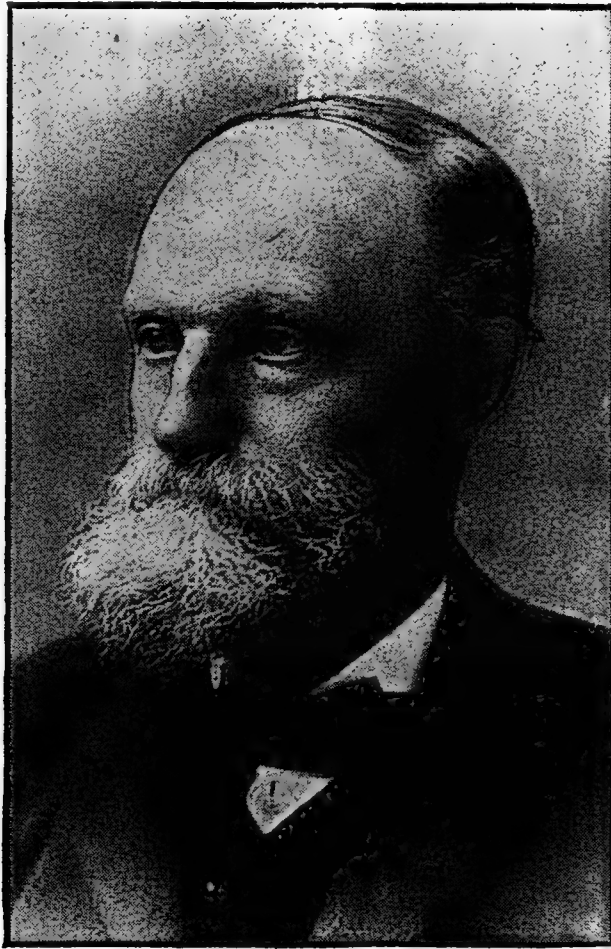
Byron Walker—I have had 100 pounds of comb honey per colony, and have had 3,000 pounds of comb honey from a late flow. Under these circumstances swarms pay me.

Mr. Alpaugh—In criticism of Mr. Simmins' essay, I do not believe in giving an empty hive under the brood-chamber. I tried it extensively one season, but the bees did not accept of it in many cases. I would sooner put the empty hive above, and tier up as required. This system will largely prevent swarming. For comb honey I like new swarms. I hive them on starters, contracting the brood-chamber, making it half the size. I space the frames very closely. If sections are on the parent colony, I remove them at once to the new, with queen-excluders between. If the old hive contains no partly-finished sections, give the new swarm sections at the time of swarming, and put a slatted honey-board between; but about this latter I am not very particular. I have had 100 pounds of comb honey from a swarm, and 100 pounds

extracted honey from the old colony. If you hive on full sheets, you run the risk of bees re-swarmling. If on starters, you will not have re-swarmling.

Increasing by Dividing Colonies.

President Miller, in response to a wish expressed by Mr. A. I. Root, asked: "How many would, if they wanted to in-



A. I. ROOT, Editor of *Gleanings*.

crease 10 colonies to 100 as rapidly as possible without feeding, do it by dividing (artificial swarming)?" Sixty-three voted for this method and none against it.

Mr. Boardman—This question does not consider the matter from a financial standpoint.

The convention then adjourned until 7:30 p. m.

SECOND DAY—EVENING SESSION.

The convention was called to order by President Miller at 7:30 o'clock, when he read the following essay by Charles F. Muth, of Cincinnati, Ohio, entitled:

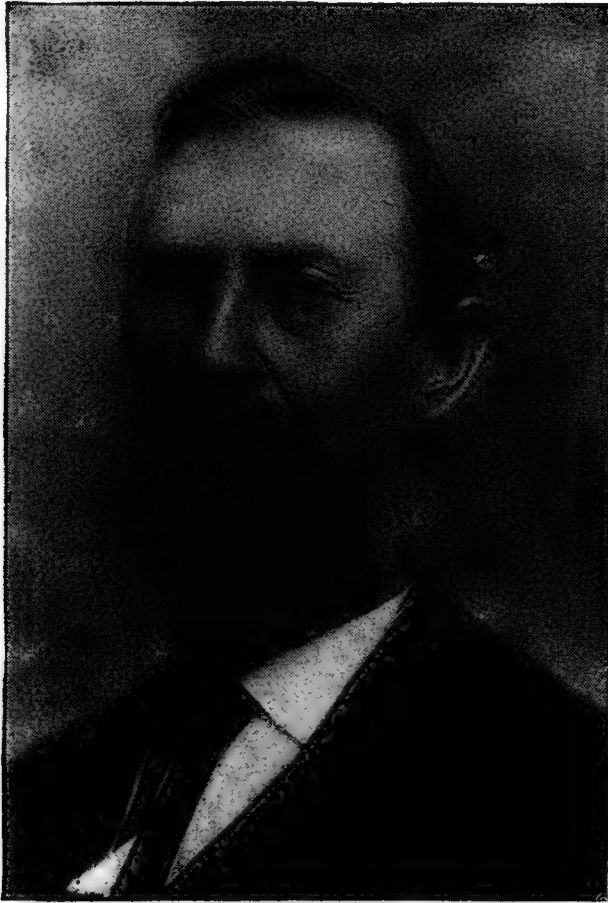
Grading of Honey—Should There Be Any Change in the Ruling Adopted at the Last Convention?

The arrivals of shipments of honey in good condition are many times of the same importance as the production of a good crop. After the industrious bee-keeper has put to the test all his energies for nine or ten months of the year, in order to get his bees in proper condition by the time that his season begins, and after a good crop has been harvested, the honey is generally sold to dealers in large cities. The safe arrival of his honey is now the first and greatest factor in the success of his enterprise.

His disappointment would be great upon learning that his honey had arrived in a damaged condition. He would know at once, or imagine, that the profit on his year's labor was lost. He has no idea of the vexation and disappointment caused to the dealer, who also loses money and valuable time; and, if of a generous disposition, often loses more than he can afford to, while, on the other hand, human nature inclines the shipper to think that he is treated unfairly by the other party. An unpleasant feeling is created between parties who should be friends, and often would be the best of friends if they knew each other intimately.

Since a safe arrival is one of the preliminaries necessary for the success in our pursuit, and of no minor importance than grading, you will please allow this introduction.

The sale of all goods is promoted by their inviting appearance. Special care must be taken in the preparation for market of comb honey because—a fancy article. All should be put up in neat glass cases, with at least one glass front. Cases should contain no more than 20 or 25 pounds net, while smaller cases are often preferable. Each case should be filled not only with combs of the same color, but also of



CHARLES F. MUTH.

the same quality, and the front row of each case should always be a fair sample of its contents. The sections must stand solid in their cases, so that their extensions are a fair protection for the combs they contain.

I speak from my standpoint as a dealer in the Cincinnati market, where glassed cases are most popular. I am

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not prejudiced to the packing of comb honey in neat paper cartons, which has nothing against it in neatness of appearance and safety in transit.

When small shipments are made, it is well that the shipping cases be crated, *i. e.*, that a number of cases be put in crates of such shape as will not be apt to tumble over, and which are not too heavy for one man to handle. The fronts of cases should always be exposed to view, and the crates marked "COMB HONEY—HANDLE WITH CARE," in plain letters.

When shipments of car loads are made, care should be taken in placing each case solid in the car. No vacant spaces should be permitted inside of the car, so as to prevent the sliding of the cases to and fro in transit. All cases should be placed so that their combs stand lengthwise of the cars. We can haul comb honey safely on a rough transfer wagon, over roughly-bouldered streets, while the dropping of a case on a table from a height of six inches only is apt to break every comb.

Shipments of extracted honey require the same care in proportion as those of comb honey. Since, perhaps, 75 per cent. or more of all extracted honey produced is sold to manufacturers, good, stout vessels are most essential for shipments. Barrels and half barrels are most desirable for our trade, but 60-pound tin cans, two cans in a crate, are very acceptable. In fact, any vessel will answer the purpose which is clean and safe in transit.

No barrels require waxing or paraffining, but all must be made tight when dry, then cleaned out and filled with honey. Especially is this the case with second-hand barrels. They must be made perfectly tight by having their hoops driven when dry, in order to prevent disappointment.

We had several times an unpleasant correspondence with parties who had soaked their barrels in water in order to make them tight, and who did not know that honey would absorb every drop of moisture from the staves, gradually but surely, and the barrels become more leaky every day as the

absorption of moisture would progress. By the time they had arrived at Cincinnati the barrels were only partly full, and some were entirely empty.

I have written many letters on this subject, have spoken about it at bee-keepers' meetings, and through the bee journals, and whenever occasion would offer, and I am surprised that so many of our friends, at this day, don't see the point yet. A general knowledge of the above would prevent sore disappointments, unpleasant correspondence, and hard feelings between producers and dealers, whose interests require that they should be friends.

The grading of comb honey as adopted by the ruling of the last convention is, perhaps, as good as can be made, and may stand. However, it amounts to nothing in the transaction of business, and is of no practical value; but it assists in giving employment to our theorists.

I have no use for the word "Fancy" in relation to dark honey. The fact of comb honey being dark excludes all "Fancy."

We prefer to call honey by its proper names, such as white clover, alfalfa, basswood, mangrove, sage, golden-rod, aster, holly honey, etc. These, and other distinct varieties, we call by their proper names, and make prices according to their qualities. Others we class as dark honeys. Buckwheat belongs to the latter, of course, but being of a distinct variety, we call it "buckwheat honey." By these means we have succeeded in convincing our neighbors that the flavor and color of honey is determined by the source from which it was derived. The result is that none of our customers suspicion the purity of our honey when a strange flavor strikes their palates. Sugar syrup fed to bees tastes unmistakably like sugar syrup honey. It has no other flavor.

CHARLES F. MUTH.

It was moved by Dr. Mason, seconded by R. L. Taylor, that the subject be referred to a committee on resolutions.

Mr. C. C. Clemons, of Kansas City, Mo., then read the following essay, on

The Grading of Honey.

Your worthy Secretary requested me to prepare and read an essay before this Convention on "Grading Honey," and also to make suggestions as to packages; at the same time warning me against any unnecessary embellishment, but suggested that I make it brief, and to the point. Therefore, without further apology, I submit the following for your consideration, hoping the suggestions may lead to the adoption of some plan that will be applicable and satisfactory to producers and dealers in all parts of the country.

I suggest four grades for comb, two for white, two for amber, namely:

NO. 1 WHITE COMB.—Should be all white, good flavor, combs straight, of even thickness, firmly attached to sections, all cells well filled, with white cappings, except a row of cells next to the wood; free from travel stains, wood clean.

NO. 2 WHITE COMB.—Should be white, or very light amber, good flavor. white or light amber cappings, sections not less than three-fourths filled and sealed, wood clean.

NO. 1 AMBER COMB.—Should include all amber honey of good flavor, combs straight and even thickness, firmly attached to sections, all cells well filled and sealed, except row of cells next to the wood. Slightly soiled from travel stains not barred from this grade; wood clean.

NO. 2 AMBER COMB.—Should include all honey of good flavor, irregular combs, and any color, at least three-fourths of the sections filled and capped.

I suggest three grades for extracted honey, namely:

WHITE EXTRACTED.—Should be water white, good flavor and clean.

AMBER EXTRACTED.—Should be bright, good flavor and clean.

DARK EXTRACTED.—Should include all honey of good flavor and too dark to grade amber.

This is an important subject, and there is real necessity for adopting some uniform system. As it is, every producer has a right to grade according to his own peculiar notions, and call his grades anything he pleases.

This has been demonstrated to us during the last two seasons. For instance, a producer in California writes us his honey will grade "Extra Fancy White, Fancy White, White, Extra C, and C." One in the extreme eastern part of the country writes that his honey will grade "Extra Fancy White, No. 1 White, Fancy White, Fancy Amber, No. 1 Amber, Fancy Dark, and Dark." Another, from Missouri, says his will grade "No. 1 White, No. 2 White, No. 1 Amber, and No. 2 Amber."

Our firm just received a car-load of white comb honey from California. The shipper makes two grades—No. 1 White and No. 2 White—and I presume if there had been any amber in the car he would have graded it the same way, and called it No. 1 Amber and No. 2 Amber. This meets my idea about grades.

Different sections of the country have very different ideas on this subject; this is one good reason why a uniform system of grading should be established; and in order to accomplish this, I find no good reason to change my views on this subject from those advanced by me two years ago at a meeting of the Missouri State Bee-Keepers' Association. I believe as few grades as possible is the best, and I do not believe in grading too high.

One of my reasons for making two grades of white and two of amber is, there is a great deal of light amber honey that will bring almost as much money as No. 1 White, but could not be classed in that grade, and too good to be graded No. 2. If you only have three grades, you would have to have white and amber in No. 2; and in making a sale you would have to designate how much of your No. 2 was white and how much was amber, hence I think it just as necessary to have two grades of amber as it is to have two grades of

white; therefore, in the absence of a standard grade, the dealer must require the producer or seller to send a sample. If he sends the best he can pick out, or even an average case, there will generally be [some in the lot that will not come fully up to the sample, and the buyer "kicks," and requires a rebate. If you send a sample of the poorest, then you fail to get market value for your crop. So, in order to bring the producer and dealer together on a simple basis where transactions can be made with justice and satisfaction to all parties, we should be careful to not grade too high, make as few grades as possible, and as liberal as can be done consistent with encouraging improvement and progress towards higher grades.

Most of our largest producers in Missouri only make two grades of their comb honey, and I can say with safety that their No. 1 white honey will compare favorably with any honey marked "fancy," and bring as much money.

As stated before, I think four grades of comb honey (and by the grades being as suggested) will permit all good, merchantable honey, with only such restrictions as will protect the producer, and work no imposition to the dealer.

You will observe I specify "good flavor" in all grades, so the dealer in ordering honey would expect good flavor, of whatever grade received. Flavors may differ according to the blossoms, whether white clover, sage, basswood, Spanish-needle, or from any other blossom; but if of "good flavor," would fill the bill. And all honey not coming under this system of grading should be put on the market as ungraded and sold on its merits.

In regard to packages, I think a uniform style of package should be adopted, and universally used. There is nothing more unsightly than a stack of comb honey put up in a lot of packages all sizes and shapes. On the other hand, what is more pleasing than to see it arranged from packages of a uniform style and finish? I would suggest the single-tier crate, holding 12, 18 or 24 sections. I would have nothing larger than 24, all made of white wood with glass fronts.

And as the railroad companies require the glass to be covered, I would suggest that the box factories, in making boxes, provide for this new (but unreasonable) law by having strips for this purpose.

The tight-wood boxes should never be used, as it is necessary to open the boxes to take the sections out to show to customers, causing not only a loss of time, but more or less damage to the honey. The retailer has no use for the tight-wood cases (and he is the fellow to be pleased in the end); he can take the white-wood glass-front boxes and make a fine display, and this aids greatly in selling.

I do not think that any improvement can be made on the five-gallon tin can, screw top, two in a wooden case, for extracted honey.

In conclusion, I hope before another "Columbian Convention" is held that we will have the pleasure of seeing some satisfactory and uniform style of grading and packages adopted.

C. C. CLEMONS.

After Mr. Clemons' essay, the subject was discussed as follows:

R. F. Holtermann thought the grading of comb honey too low, that of extracted honey too high, as mentioned in Mr. Clemons' essay. There was comb honey at the World's Fair too high to grade properly under it; with extracted there was much strictly first-class honey not water white—in fact, only in exceptional cases was it water white.

Dr. Miller thought the question at issue had been touched upon only very lightly.

Mr. Muth—I have not touched upon it because it is of no practical use in marketing honey.

Mr. Draper thought that this method of grading was of no practical use. When honey was scarce, an inferior product would be allowed to rank as first-class. When honey was plentiful, buyers were more particular about grading.

Mr. Wilcox—There should be a proper grading. Disputes could be avoided in buying and selling by such a recognized standard. He did not object to a little travel-stain; it was an indication of well-ripened honey.

An animated discussion then took place. Some favored a change, others to the contrary. A warm dispute seemed inevitable, and on motion of Dr. Mason, seconded by O. L. Hershisier, it was voted that the whole matter be laid on the table.

It was then moved by Mr. Muth, and seconded by Dr. Besse, that the programme be finished during the evening, and that the convention meet at the honey exhibits on the World's Fair grounds on the following day.

In opposition, it was moved by Dr. Mason, and seconded by R. L. Taylor, that the motion be laid on the table. The motion was carried.

It was then moved by R. L. Taylor, and seconded by Mr. Muth, that the topic, "Wintering of Bees," be taken up. Carried.

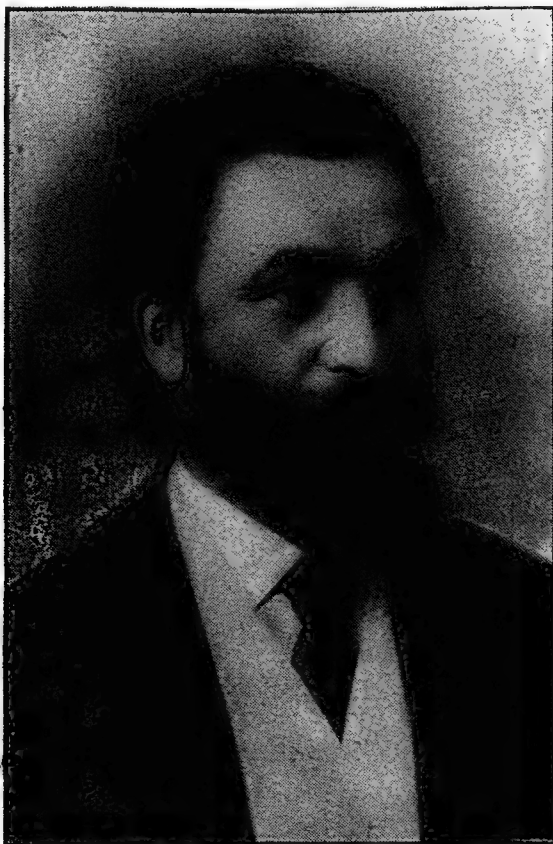
The following essay by Mr. Charles Dadant, of Hamilton, Illinois, was then read by his son, Mr. C. P. Dadant:

Wintering Bees on the Summer Stands.

In answer to the request of Secretary Benton, I will quote the conditions that we think indispensable to succeed, in our locality, to winter bees on the summer stands, even in as bad a winter as the last. These conditions are:

1. A sufficient number of bees, especially of young workers.
2. A sufficient provision of food of first quality.
3. A hive well closed, with absorbents above the combs, to remove the dampness produced by the breathing of the bees.
4. A protection around the hive, on the northern side especially, leaving the entrance side free.

First—Nobody will contest that a good colony of bees will winter better than a small one; but it is also necessary that this colony contains a sufficient number of young bees, for old bees alone would not suffice. They have lost their inclination to remain at home; accustomed to fly out of doors at dawn, they will profit by the sunny days to hasten away, far from their hives, at the risk of being unable to return on

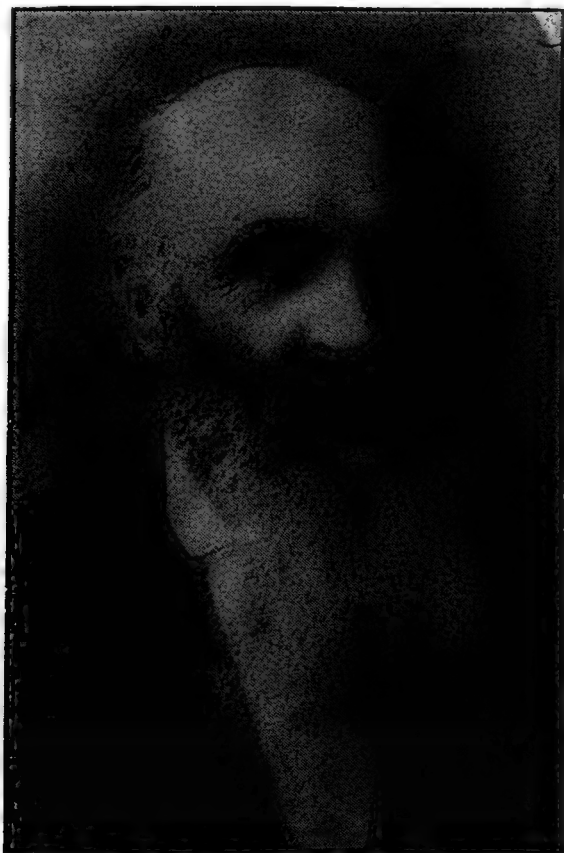


C. P. DADANT.

account of the cold, while the young bees, more cautious, will live longer. Unfortunately, most of the hives used, especially the eight-frame hives, are too small to give the bees the chance of rearing young bees in sufficient numbers for the fall.

Second—Every bee-keeper knows that a large quantity of food is necessary to winter a colony of bees; but if this food is of poor quality, and if the bees are confined for more

than three or four weeks their intestines will be unable to contain all their feces, and they will die after having soiled their combs and the inside of the hive. The poorest food gathered by bees is the juice of fruits, then the honey-dew. Both are bad food for winter, especially the first. The dark



CHARLES DADANT.

honey from fall blossoms is better, but it fills the intestines of bees too fast. The best of all is thick clover honey, of which the quantity, in case of need, can be increased by an addition of white sugar syrup. It is with this mixture that we replace the poor food of our bees, if necessary. It is with the same that we make up their provisions when short.

Third—When we find a hive which has wintered with a current of air inside, we notice that its bees have soiled the entrance of their hive. From such fact we have drawn the

conclusion that a current of air is injurious to bees. We have noticed, also, that absorbing matters above the frames take out most of the dampness produced by the breathing of bees and by the evaporation of their food.

Fourth—As the northern winds are very cold, we surround every one of our hives with a thickness of dry leaves, or straw, kept in place by small string ladders, leaving the front part free. Such a protection helps the bees to keep warmer, without interfering with their going out as soon as the sun's rays are sufficiently warm.

By such means our losses in winter are very small, if we compare them with the reports that we read in the bee-journals.

CHARLES DADANT.

The next essay was by Hon. George E. Hilton, of Fremont, Michigan, entitled:

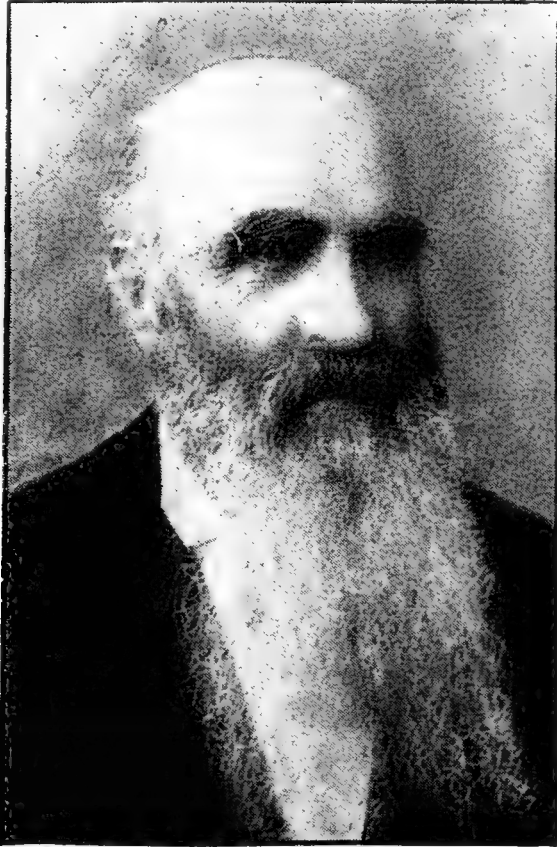
The Wintering of Bees.

That old yet new topic,
That threadbare, yet fresh topic;
That topic we always remember
About the first of May.

Were I writing for some of our local gatherings, perhaps my experiences and experiments of the past eighteen years would give a gleam of information to the novice who might be present. But to come before an assembly of bee-keepers, whose experience dates back to my early boyhood, and (some of them) to my birth, causes me to feel keenly my inability to do the matter justice.

Justice, did I say? Has the matter ever received justice at the hands of a writer? Has the wintering problem ever been solved? Will it ever be solved? Those of you who have met with continual losses year after year, will answer in the negative, notwithstanding each succeeding year has found you more vigilant, each year feeling you have discovered the key to the problem, only to be met the next year with disaster, discouragement and disgust. Those of you that

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honey from fall blossoms is better, but it fills the intestines of bees too fast. The best of all is thick clover honey, of which the quantity, in case of need, can be increased by an addition of white sugar syrup. It is with this mixture that we replace the poor food of our bees, if necessary. It is with the same that we make up their provisions when short.

Third—When we find a hive which has wintered with a current of air inside, we notice that its bees have soiled the entrance of their hive. From such fact we have drawn the

conclusion that a current of air is injurious to bees. We have noticed, also, that absorbing matters above the frames take out most of the dampness produced by the breathing of bees and by the evaporation of their food.

Fourth—As the northern winds are very cold, we surround every one of our hives with a thickness of dry leaves, or straw, kept in place by small string ladders, leaving the front part free. Such a protection helps the bees to keep warmer, without interfering with their going out as soon as the sun's rays are sufficiently warm.

By such means our losses in winter are very small, if we compare them with the reports that we read in the bee-journals.

CHARLES DADANT.

The next essay was by Hon. George E. Hilton, of Fremont, Michigan, entitled:

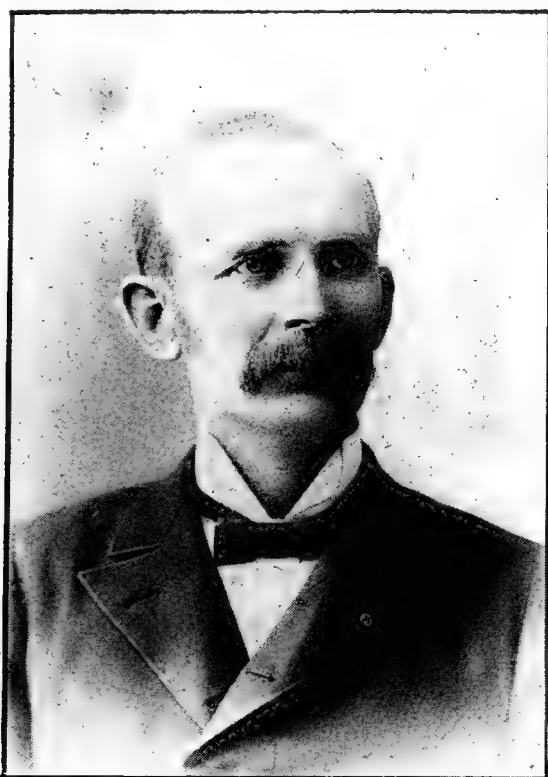
The Wintering of Bees.

That old yet new topic,
That threadbare, yet fresh topic:
That topic we always remember
About the first of May.

Were I writing for some of our local gatherings, perhaps my experiences and experiments of the past eighteen years would give a gleam of information to the novice who might be present. But to come before an assembly of bee-keepers, whose experience dates back to my early boyhood, and (some of them) to my birth, causes me to feel keenly my inability to do the matter justice.

Justice, did I say? Has the matter ever received justice at the hands of a writer? Has the wintering problem ever been solved? Will it ever be solved? Those of you who have met with continual losses year after year, will answer in the negative, notwithstanding each succeeding year has found you more vigilant, each year feeling you have discovered the key to the problem, only to be met the next year with disaster, discouragement and disgust. Those of you that

live in a more fortunate locality, where you have a more steady honey-flow up to the close of the season, with an absence of boneset, green fire-weed and other poisonous honey-producing plants, will say: "Well, I should like to show that fellow how to winter bees." And, my friend, I will say to you that if he will move his bees to your locality next spring you can do so. But if you will take your bees to his locality, I will venture the assertion that you can't.



HON. GEORGE E. HILTON.

Why? Because if the question is asked you what you do to your bees during the summer months that they winter so successfully, your answer, like the boy's, will be, "Nothing." But, my friend, remove your bees to the locality of our unfortunate friend, whose intellect is just as bright as yours, and whose perceptions are just as keen, and take the same course you do at home, and our unfortunate friend will tell you what you don't know about wintering.

And why is this? It is because in these localities there is a flora that produces a fluid not worthy the name of nectar, that the bees gather, and in the fall they gather large quantities of this *stuff*, and the bee-keeper is deceived.

He weighs his hives, or he raises his combs, and they are full of a glistening "something," all ready to be capped, and which, in the estimation of the deluded bee-keeper, will soon be capped. But, my friends, they don't cap it; it seems to produce no wax scales; and honey, or nectar, or stuff, whichever you are pleased to call it, that does not produce enough wax to seal or cap itself, makes very poor winter stores.

Some of you will remember that in taking out your last extracting combs, you were surprised to find so much honey in them, and so little of it capped; and some of you will remember that you gave these same full, uncapped combs to colonies that needed feeding, and that the first of the next day they were dead with plenty of honey in the hives. Perhaps some of you did this just before coming to this Convention; if so, please mark them when you go home, and note that I predict you will get no surplus from them next spring.

"But," some one says, "what shall we do about it?" My friend, let me ask you, what have you done about it? Have not you, in the early part of the honey-flow, found your brood-nest clogged with insufficient room, as you supposed, for the laying capacity of your queen? Haven't you removed these beautiful combs of well-ripened stores, that your bees have placed there for future use? And haven't you extracted the honey and returned the empty combs that your queen might fill them with eggs? And haven't the nurse-bees consumed the remaining portion of the well-ripened honey to rear a lot of young bees at a time when they were worse than useless to you or the colony?

Of course you are anxious to make a good report to the bee-journals, and get all the money out of the bees you can, to help pay for those bees you bought only two months ago,

to replace your winter losses, and at the same time you are laying the foundation for more winter losses.

Now, if you must remove this honey from the brood-nest, and if you must have a hive teeming full of bees when you don't want them, please set those combs away until the middle of September, or such a time as in your locality the bees have largely ceased to gather that class of—what do you call it? Then remove those well-filled combs that look so nice, yet are only capped an inch or two from the top, replace them with those combs you removed in July, and see if your bees winter any better. I have no objections to your extracting these uncapped combs, and in the spring, after the bees begin to fly, you can stir up what little grape-sugar there is in it, and mix with the liquid that stands on top, bring it to a scald, skim it, and feed it to the bees in an outside feeder. It is just as good as water for them in the spring when they need so much water, and will have a tendency to keep them at home, and out of the cold currents of air that kill so many old bees for us in the spring, when going for water or in search of nectar or pollen.

In the discussions that will likely follow this essay, we shall learn how and when to put the bees into the cellar, when to take them out, and what to do with them after you take them out. This I do not understand. In my locality I think it best to put them into a good double-walled hive when they swarm; put the hive where I want it to stand for all time, and let it stand there. I never handle the hives in manipulation, always preferring to handle the bees and combs.

My bees are supposed to be ready for winter when I remove the surplus cases in the fall; the enameled cloth is removed from the surplus cases, and a piece of woollen blanket is laid directly on top of the frames—no Hill device, cob-house, or other construction; upon this is placed a chaff-cushion, made by making a wooden rim that will just slip inside the hive. I have experimented with the width of this rim from four inches to eight, and have decided that four

inches is the better. This has burlap nailed upon the top and bottom, and is filled with wheat chaff. This is placed directly upon the woolen blanket and they are ready for winter.

I consider it only a fair half day's work to remove the cases and put 100 colonies into winter quarters; in fact, I have removed the cases and put into winter quarters 50 colonies in two hours.

And now I am going to own up that I have been fortunate in location, and until within the past four years have not known what it was to meet with a failure in the production of honey. I had a location where I could average 75 pounds of comb honey per colony. I had a continual flow from raspberry bloom until frost, and the wintering problem did not trouble me, but since the poor seasons came on I have learned some things about wintering, and still have many things to learn.

I hope you will be able to glean more from between the lines than I have written, for I frankly admit that I know but little about the subject, and wonder why I was chosen to write this essay, unless it was to provoke discussion; and I hope you are just boiling over to say something that will give us "more light" on wintering bees.

I know of but one true and unfailing solution—that is, just find a location, such as I have described, and once had, and with favorable seasons would still have, and the problem is solved with almost any reasonable treatment.

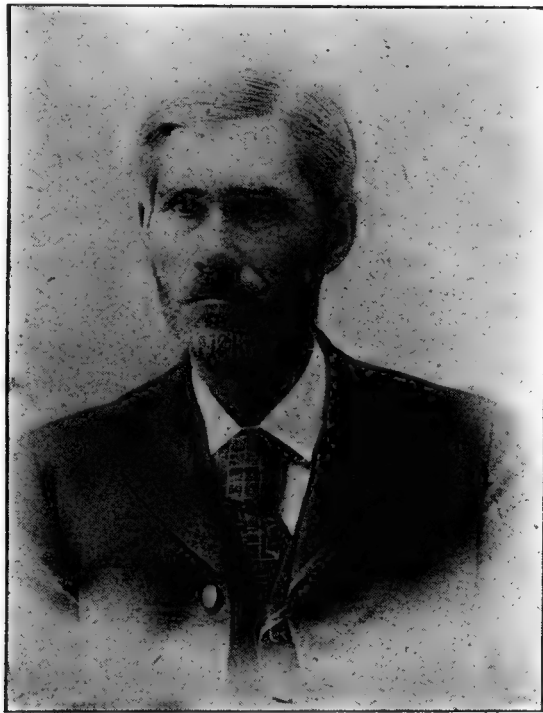
GEORGE E. HILTON.

The Secretary then read the following essay, written by Mr. G. R. Pierce, of Blairstown, Iowa, on

Winter Losses—Their Remedy.

Success in every branch of industry is conditioned upon right management, which implies an intelligent conception of the fundamental principles relating to that particular industry. There are instances when men enter some occupation totally ignorant at the time of the proper methods that should

be used to reach the greatest results with the least expenditure of labor and capital, and yet are fairly successful. Such instances are, however, exceptional, and usually only occur at the beginning of an industry before competition has entered; after this, a tireless and relentless struggle for existence must be looked for, and intelligent, well-directed methods must be adopted, or failure is inevitable.



G. R. PIERCE.

Bee-keeping may be said to have passed the primitive stage, and is now an industry in which more or less competition will prevail, and success will only attend those who strive to overcome all difficulties, seize every point of vantage, and adopt those methods which have been approved by experience and experiment. Much loose talk is indulged in by some bee-keepers regarding the stability of bee-keeping as an occupation—owing to the product, honey, being used as a luxury. Oranges, bananas, raisins, and other products, too numerous to mention, are used by people of northern

latitudes as luxuries, and the increase of importation of these articles is greater than the increase of population; there appears no valid reason why the consumption of honey should not conform to the same law.

During the last decade bee-keepers as a class have not been as prosperous as we could wish. The last five seasons have been noted for the scanty flow of nectar; the pecuniary



IOWA WORLD'S FAIR HONEY EXHIBIT.

returns have been reduced to a minimum; the bees have consequently been neglected, and in that part of the country called the "Northern States," there are, I think, a fewer number of colonies than there were twenty-five years ago. There are probably a greater number of specialists in bee-keeping than formerly, but among the farming community the number of colonies seems to be decreasing every year.

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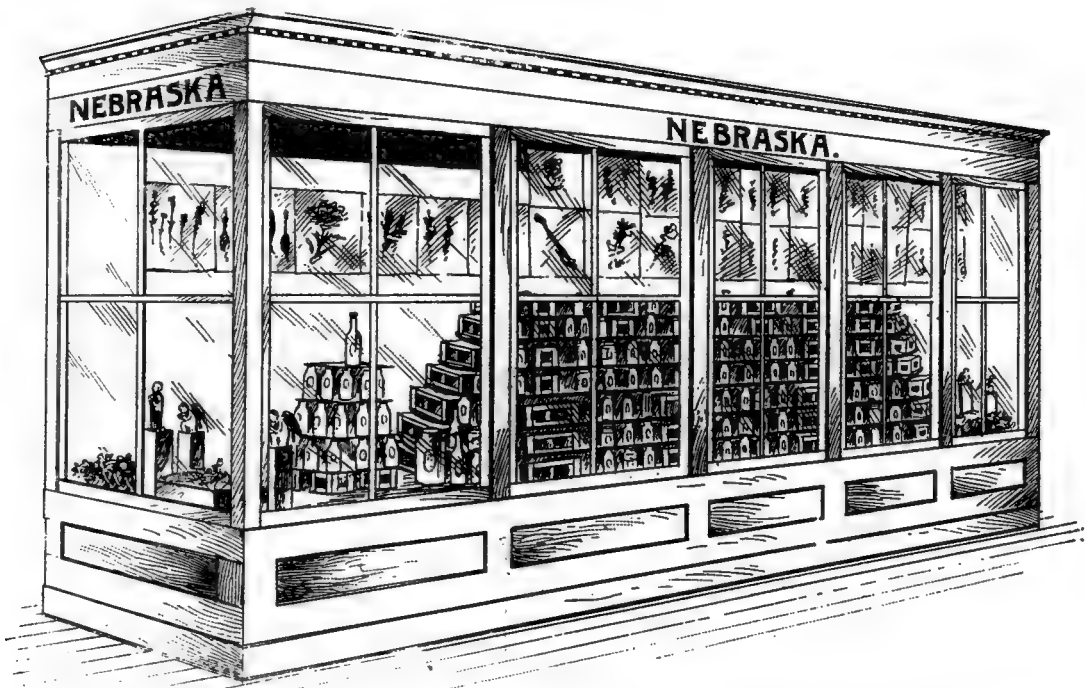
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The fact that great numbers of colonies perish nearly every winter in the northern States, has induced some writers to assume that bees are not fitted or intended by nature to live in latitudes having winters of almost arctic severity; that their natural home is in the sunny south, where the northern blizzard and the snow-bank are unknown. We have localities, without doubt, where the soil is so barren that it will not support a nectar-yielding flora; in such places bees



THE NEBRASKA STATE HONEY EXHIBIT AT THE WORLD'S FAIR.

could not thrive, whether the winters are cold or warm. Insects are very much like other animals in this regard; they flourish wherever they can find suitable food in sufficient quantity for their needs. Even within the Arctic zone, where it is popularly supposed "cold desolation reigns supreme," animal life is wonderfully prolific. These are mainly representatives of oil and fur bearing species, but members of the *Articulata* are also present, for we read that Lieut. Peary saw a bumble-bee in northern Greenland, and found the larvæ of insects at the edge of one of the largest glaciers of

that abode of snow and ice. Capt. Parry, the famous English navigator, also found six species of insects on Melville Island--a point about 2,000 miles due north of the northern boundary of Montana. Russia, a land proverbial for its cold winters, produces large quantities of honey and wax.

When we consider these facts, it seems absurd to suppose that the magnificent tract of country, extending from Maine to the Rockies, is not capable of supporting bees. We



H. D. CUTTING,
Superintendent of Michigan State Exhibit at the World's Fair.

have here a country upon which nature has bestowed with a lavish hand a wealth of fertile soil, and luxuriant vegetation which equals the most favored regions of the globe. In view of the favorable conditions present for the support of animal life, it seems fair to presume that the winter mortality among bees in the northern United States is the result of crude and improper methods of protection, and not of climatic conditions.

The cause of winter losses has been discussed by beekeepers from almost every conceivable stand-point. Cold, impure air, moisture, pollen, lack of water, bacteria, have, each in turn, been held responsible for the trouble, and yet the bee fraternity is not a unity in explaining the matter. This is not surprising, for the method of reasoning adopted has been mostly of the pre-Baconian era of philosophy, when causes were assumed, and facts were fitted in as found convenient. This matter works well until we come in contact



E. WHITCOMB,
Superintendent of Nebraska Honey Exhibit at World's Fair.

with a fact that is one of the stubborn kind—one that will not fit, no matter how it is turned or twisted. It will not even do for an exception to a general rule, but is continually intruding at every point, and there is nothing for us to do but to assume another cause, which in turn is overthrown by some other obstreperous phenomenon. The results of such a method of investigation are utterly unreliable, as may be illustrated by the following incident:

Some years ago a gentleman who had lost nearly his entire apiary, wrote an article in which it was urged with considerable zeal, that winter losses were caused by the bees

gathering and storing the juices of fruits which, in turn, caused the store of honey to ferment, thus naturally producing disease. This view had been so ably held by the gentleman that I resolved to test the matter. I therefore extracted all the honey from several hives, and fed the bees a mixture of honey and cider--nine parts by measure of the former to one of the latter. Now, if these bees had any respect for human logic, they would have promptly died during the winter, but they did not; the facts in the case failed to fit when put to the test. Other experiments in this direction have convinced me that bees can live upon what they gather, store and seal, if they are properly protected. They will even tolerate stores of so-called honey-dew of the most nauseous character, but will show the effect of such a diet in the spring, as they are less active than ordinarily, breed more slowly, or not at all, and rapidly dwindle in numbers unless supplied with pure honey or sugar syrup.

We may infer the cause, and apply the remedy against winter losses by considering the following facts, which experience has furnished, or will teach us:

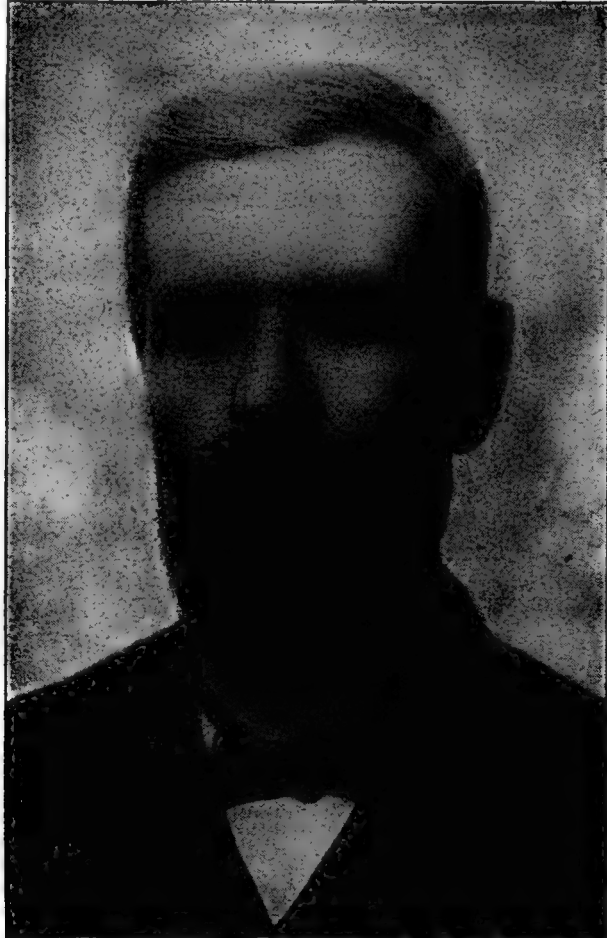
First--Bees winter in good condition generally, if they have sufficient food, and can take cleansing flights every three or four weeks.

Second--They do well in very severe winters if the period of greatest cold is experienced in November, December and January; but if the coldest weather is in January, February and March, disease is almost sure to be indicated, unless the hives are well protected.

Third--A severe winter following a season that gave no fall flow of honey is usually fatal to the inhabitants of an unprotected hive.

Fourth--A normal colony of bees hived in a large box or gum, and allowed to keep all honey gathered, say to the amount of 60 to 80 pounds, will live and keep healthy, no matter how severe or how prolonged the winter may be. Instances are on record where bees have occupied such hives from ten to fifteen years.

Fifth—A colony of fair strength as to numbers will endure the severe cold of our winters; no matter how prolonged, until a part or all of the cluster have eaten the honey stored directly above; if the cold continues after this, there is danger ahead.



HON. EUGENE SECOR,
Judge of Apiarian Exhibits at the World's Fair.

By considering one or two of these propositions, and ignoring others, one may assume any disturbing element to be the cause of winter losses; but to reach the true cause, all facts and phenomena with which we are acquainted must be carefully considered.

In northern climates all animals subject to man require virtually the same conditions to endure cold, and these are

quietude, a warm abode and sufficient food of the proper kind to supply the nutritive functions of the body. Bees are no exception to the rule, though they are physically different from the vertebrates. They gather the food suited to their organism, and, when left to themselves, will store it in such a position as to be available at all times.

They are enabled to enjoy a reasonable degree of warmth by their mode of living at the ceiling of their dwelling instead of on the floor, thus enjoying an atmosphere made temperate by the heat evolved from the clustered colony.

In order to meet the requirements of healthy bee-life in out-door wintering, I would briefly suggest the following:

First—A sufficient quantity of honey to meet the needs of the colony until the bloom of the following spring. This honey store should be so distributed that the combs upon which the bees are clustered will contain enough honey to feed the colony during cold weather, reserving the side stores for distribution in the spring. Never put empty comb in the center of the hive after the honey season has closed.

Second—The cover of the hive should be a solid board, sealed tight by the bees, and this covered to a depth of ten or twelve inches with some heat-retaining substance, in order that the top of the hive may be kept warm; protection to the other parts of the hive is also absolutely necessary, at least in the northwestern States.

I have followed the discussion in *Gleanings* concerning sealed covers with considerable interest, and am not surprised that success has not attended some of those who have tried them. The reason is quite plain to my mind. Too much emphasis has been placed upon one part of the method; that is, the sealed cover, ignoring to a great degree the covering above—a most essential adjunct. In some regions, as Central Ohio, Indiana, Pennsylvania, etc., the depth of covering indicated may not be necessary, but in colder climates the sealed cover will be a failure without it.

Space does not permit of my explaining in full all the details of my method of wintering. In my work, "The Winter

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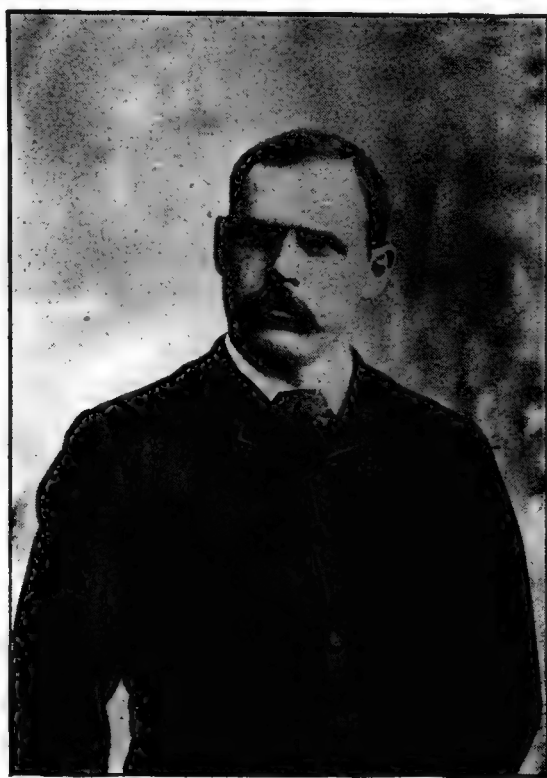
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Problem in Bee-Keeping," I have stated these at length. Nor do I consider it necessary that all bee-keepers should winter their bees according to certain stated plans, but every one should understand what conditions are needed, and then provide for these in any manner convenient to his or her situation and surroundings.

Since publishing "The Winter Problem," I have found by testing that an empty space below the hive is a valuable



VICE-PRESIDENT O. L. HERSHISER,
Superintendent of the New York Exhibit at the World's Fair.

adjunct in wintering out-of-doors; not to let the foul air settle to the bottom, as was at first claimed, but for the following reasons:

First—It is an absolute safeguard against the hive-entrance becoming choked when covered with snow.

Second—The bottom of the hive is, in winter, the coldest part. This space lifts the cluster above the cold boards.

Third—Bees are not as apt to fly out on cold, sunny days if the lower edge of the comb is three or more inches from the bottom-board. The strength of the colony is thus conserved, and early breeding is encouraged.

In conclusion, let me say that winter losses are not caused by poor honey, by fruit juice, by pollen, consumption or by bacteria. It is simply a case of *protection* and *food*. This supplied, and bees can be wintered in the north as safely as in the "land of the cotton and the cane."

G. R. PIERCE.

The question-box was then taken up, and the following asked first:

Prevention of Bee Stings.

Has anything been found to be applied to the face that would be obnoxious to the bees, in so far as to keep them from stinging?

President Miller—Carbolic acid; apifuge.

Value of Old Brood-Comb.

Does the age of brood-comb lessen its worth or desirability for breeding purposes?

A sample was shown over twenty years old, which had been partly pulled down by the bees and rebuilt.

Mr. Muth—I have combs over twenty years old. The bees get smaller in every old comb.

Another member had a colony over thirty years old, and the bees appeared to be doing well and were as large as ever.

Dr. Miller thought the bees might have torn down the comb and rebuilt it unawares.

Mr. Holtermann—Keeping old comb in the hive should surely be condemned.

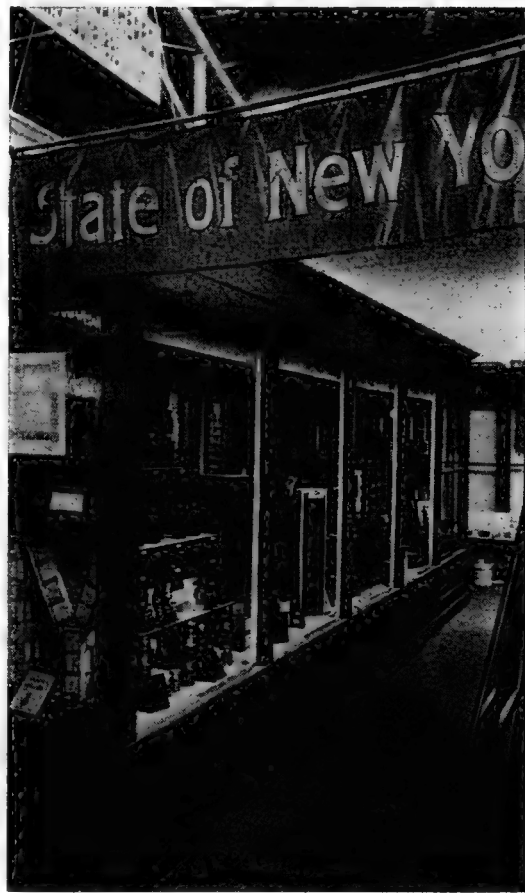
Several mentioned finding combs cut away irregularly in the hives by the bees.

Short Lived Queen Bees.

What is the cause of the short life of the queens as generally reared and sent out by queen-breeders?

Mr. Holtermann thought that we often do not know when our queens are superseded. Those we buy we watch more closely and note a change of queens.

Byron Walker agreed with Mr. Holtermann.



NEW YORK EXTRACTED HONEY EXHIBIT AT WORLD'S FAIR.

C. P. Dadant—The bees often accept a queen under protest; that is, they tolerate her for a time, and this mode ends in the queen being superseded.

Mr. Green—The long distances queens travel in the mails sometimes injures their vitality.

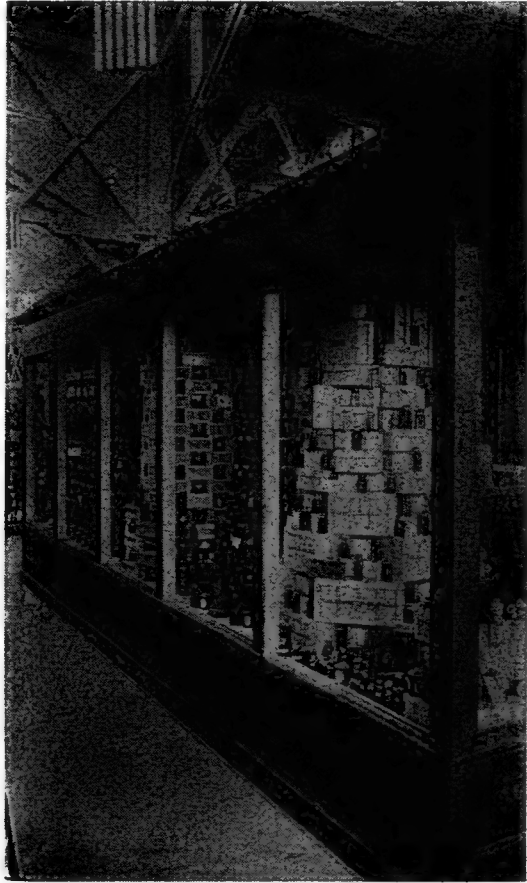
Mr. Crane—Queens are often older than represented.

Making Honey Vinegar.

Did anyone ever make first-class vinegar of honey? How is it done?

Several responded yes.

Dr. Miller—You can make excellent vinegar with honey. Directions are to be found in bee-books.



MICHIGAN HONEY EXHIBIT AT WORLD'S FAIR.

Mr. Muth—You can also make excellent wine from honey. If barley were \$1.50 per bushel, honey would be used largely in brewing.

In reply to a question, Mr. Muth said that bakers and tobacconists use large quantities of honey. A few brewers and pork packers also use honey.

Origin of Golden Italian Bees.

Where did the golden Italian bees originate?

Dr. Miller—In America, probably.

Mr. Dadant said that in Germany you can get Italian bees as bright as they have been bred in America. He thought it was a mistake to breed for color.

Mr. Muth—I got three queens from Dr. Dzierzon, in Germany, and they were not all good. We have much finer bees in America.

Mr. Benton being urged to speak, stated that Mr. Dzierzon exhibited hybrid bees as Italians in 1884, and they received a prize.

Duty on Honey.

Should the duty on honey be removed?

A vote was taken, and with one exception the vote was no.

Rearing Queens—Bleaching Wax.

Are we making a success of rearing queens in upper stories with the queen below? Three had succeeded.

What is the best way to bleach wax? Dr. Miller thought this had been explained. Expose it to the light.

Using Unfinished Sections.

Should unfinished sections be used next season or discarded?

The general verdict appeared to be in favor of using them. Mr. Crane used those clean after shaving the comb down to one-half inch in thickness.

J. A. Green would use two or three in each super.

Mr. Stone objected to old comb, as it is tough.

Mr. Theilmann shaved the comb down. When carefully cared for he thought there was no objection to such sections.

Mr. Aikin, some years ago, used 1,600 old sections. He had sixteen in each super, and the balance were new. The

flow was free and full, no swarming, and the colonies were strong. In four days every cell in the brood-chamber and the sixteen sections were full. He thought they had 1,600 pounds more honey. In such a case he would use them. In a light honey-flow, with weak colonies, he would not use them. The comb in old sections is not so good, and the honey is inclined to granulate in them.

Dequeening Colonies.

In reply to a question, Mr. Aikin gave his method of dequeening colonies. His honey-flow began about June 15, and lasted about forty to sixty days. He dequeened just before the honey-flow by removing the queen. The best he uses for nuclei. He permitted them to rear a new queen. There must not be over one queen-cell left. To do this, he looked through the hive carefully when the queen was removed again, eight, nine, or, at the farthest, ten days after, removing the queen and cutting out cells; or, if he wished to introduce choice queen-cells, he cut all out and put in these special cells; or he left them without any cells for a day or two, and then gave them a young queen. In this latter case it was necessary to make the bees hopelessly queenless, or they might swarm upon receipt of the queen. If left without cells or queens for five or six days, laying workers would begin to develop.

It was then moved by R. L. Taylor, seconded by Mr. Stone, that when the evening meeting adjourned it should do so to meet in the fair ground at the honey exhibit in Agricultural Building, at 12 o'clock the following day. Carried.

Mr. E. J. Baxter presented the following resolution, which was referred to the proper committee:

WHEREAS, We, the bee-keepers of the United States of America, are decidedly against the adulteration of foods and drinks of all kinds; therefore, be it

Resolved, That the North American Bee-Keepers' Association use every honorable means in its power to secure the

passage of the Paddock Pure Food Bill, or some similar measure, to suppress adulteration.

It was moved by Mr. Holtermann, seconded by Mr. Draper, that the secretary receive a vote of thanks and \$25 for his services. Carried.

THIRD DAY—FRIDAY.

The meeting was called to order by Vice-President Crane, and a secretary was appointed *pro tem*.

The reports of committees being called for, and none having a report, the convention adjourned.

The Treasurer's Report.

The Treasurer's accounts at the close of the convention were condensed as follows:

RECEIPTS.

Cash from former Secretary	\$69 73
Membership fees, etc., at Chicago convention	167 75
Total	\$237 48

DISBURSEMENTS.

Badges for Washington and Chicago convention.....	\$44 20
Am't toward printing proceedings of Washington convention..	20 00
Printing notices for Chicago convention, as per bills approved by Secretary	9 75
Postage as per Secretary's account at Chicago convention	11 20
Amount voted for Secretary's services	25 00
Total	\$110 15

RECAPITULATION.

Total receipts.....	\$237 48
Total disbursements.....	110 15
Cash on hand.....	\$127 33

The following name should be added to the list of members found on page 592:

Claude Smith, Norwich, New York.

Mr. H. D. Cutting, we find, is not a life member of the association, though his name is found in the list of life members on page 593.

The following interesting essay Mrs. S. E. Sherman, of Texas, had with her, thinking to read it, if it should be desired; but owing to a lack of time it was not reached:

Bee-Keeping and Poultry as an Occupation for Women.

In giving a glance backward over the past twenty years of my life, nothing strikes me more forcibly than the wonderful change made in the world's opinion of labor for our

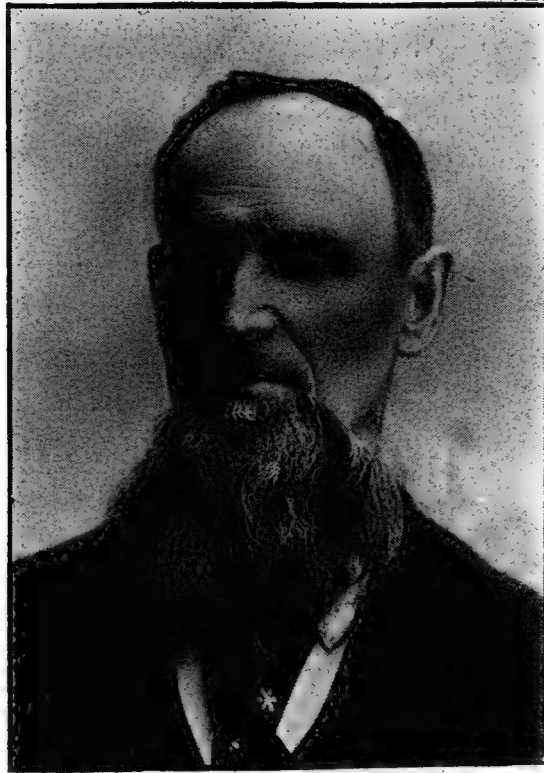


MRS. S. E. SHERMAN.

sex, and in the opportunities and openings for women who do not wish to be idlers in life, and for those who must be bread-winners.

Twenty years ago women crept tremblingly along in one or two occupations—teaching and sewing. Now she stands out proudly, surveying the many fields of different labor

lying at her feet, and only seeks to select the one to which her strength, tastes and finances naturally lead. From the higher professions, and those requiring long mental effort and training, many a woman may still be debarred, from lack of health and strength to bear the confinement of study,

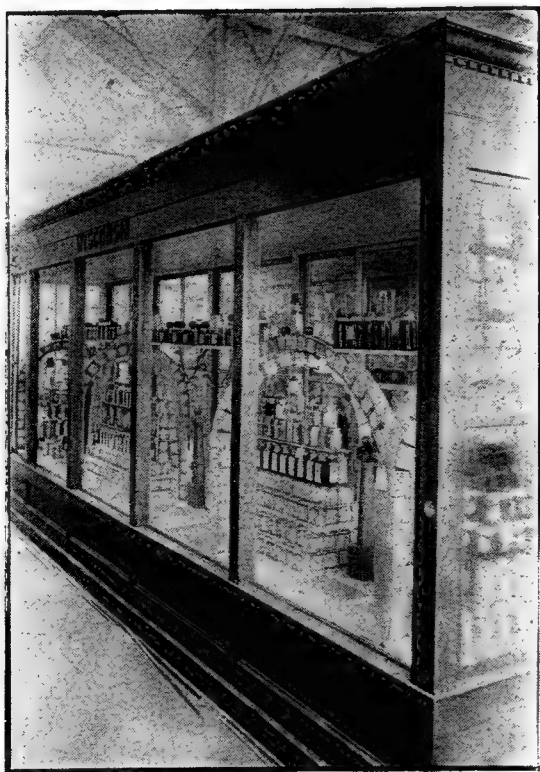


FRANKLIN WILCOX,
Superintendent Wisconsin Honey Exhibit at the World's Fair.

and with only small capital may wish an occupation still intellectual and refined, yet having the rigor of out-door life, and the demand for little capital in its beginning. To such I come with a plea in favor of a pursuit which has brought me health and strength, has given me golden opportunities for study of the beautiful and useful in nature, and has also had a very satisfactory effect upon the size of my purse.

If there is one person in all this broad land of ours who has a right to be an enthusiast on the subject of bee-culture I certainly am pre-eminently that person. A poor dyspeptic,

who for years could not eat anything that had a drop of grease in it, or drink even a spoonful of that delicious beverage—coffee—without the most dire results following such imprudence, I can now eat almost anything with impunity, which change has all been brought about by active out-door exercise, working with the ever busy little bee. Haven't I a cause, then, to be an enthusiast, think you, upon this subject?



WISCONSIN EXHIBIT AT THE WORLD'S FAIR.

One great advantage in this occupation is, it can be carried on right at home, in our very door-yards. Another is, it takes but little capital to begin with—less than, perhaps, almost anything else, in which a woman could embark.

In 1888 my bees gave me a ton of honey, gathered from the tiny flowers of the hoar-hound alone, and two tons from other flowers, making in all 6,000 pounds of honey, 100 pounds of bees-wax, and 33 per cent. increase, bringing the number

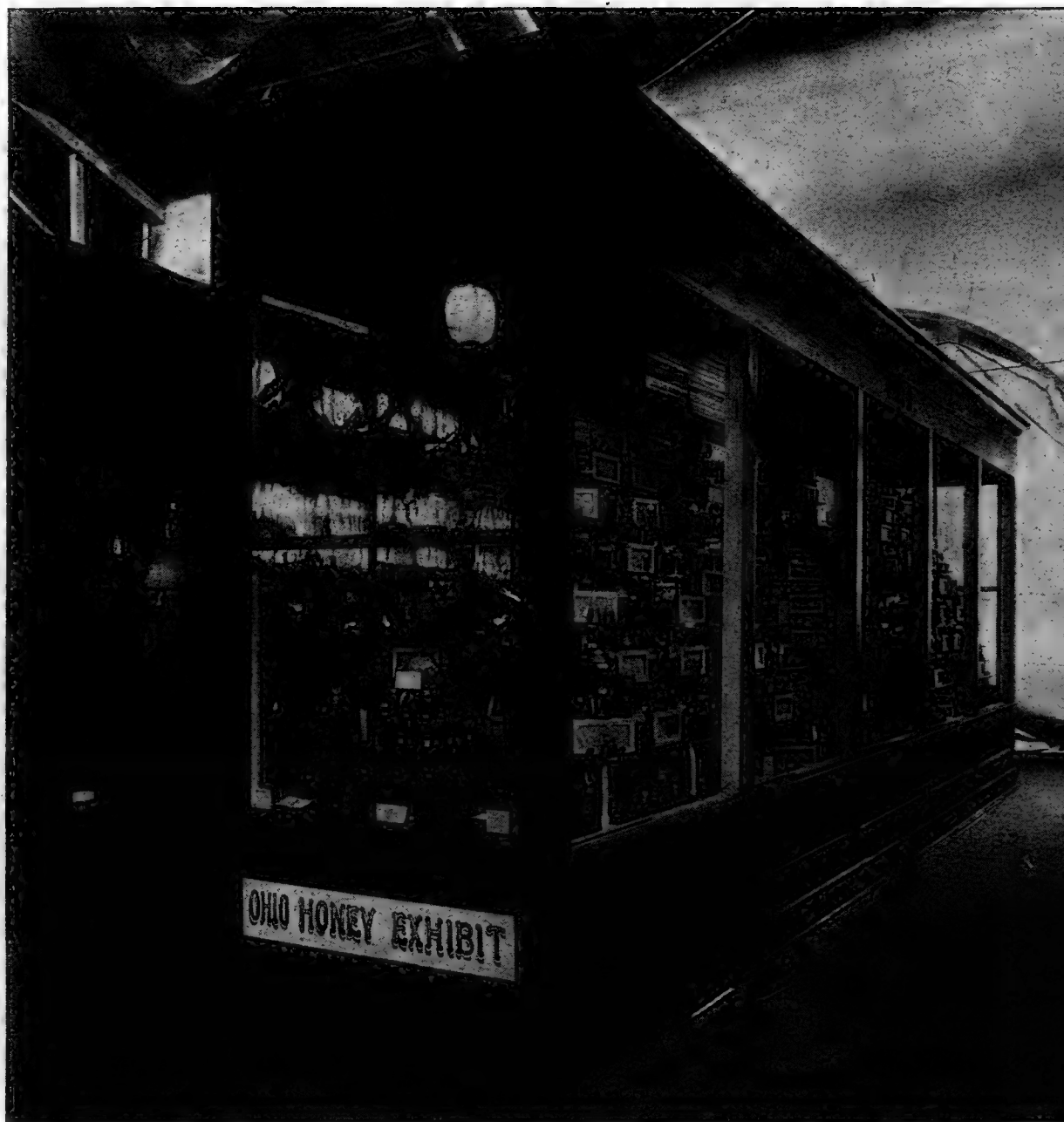
of colonies up to 60; since which time I have made no increase, as that is as many as I can well manage with other work. Remember, this was the outcome of one colony of bees in the spring of 1880!

Gathering the honey is gleaning that which is going to waste, and would otherwise be a complete loss. Did you ever think of how many things are going to waste, which a hand careful of minor details could garner in and make profitable?

In the beginning of my work there were plenty of persons, as there always are, ready to discourage me, and I was often told I could not find a market for my honey. This was all a mistake, for I have not been able to supply the demand. The largest order I ever received was for 1,030 pounds, and I am satisfied that is the largest amount that ever has left our county (Bell) in one shipment. I have made this statement before, and will repeat it, that I believe if all the honey that is secreted by the flowers in our "Lone Star" State could be gathered by the bees, there would be honey enough for every person in the State to have all they could eat, three times a day, every day in the year. What a great blessing this would be for many a poor child who never gets a taste of that God-given sweet in a life-time.

If we cannot scale the mountain tops, we can go into the humble walks of life and be gleaners in the valleys, study the wants and necessities of our bees, and have them in a condition to save that which would otherwise go to waste. With the aid of my bees I have saved many tons of honey that otherwise would have evaporated and been lost.

To the refined woman, whose nature revolts against any occupation which brings with it no outlet for busy thought and keen relish for the beautiful, bee-culture offers a pleasant, elevating opportunity for study as well as pecuniary return. It brings us in close contact with Nature and Nature's God. There are new beauties all the time coming to view. Even the despised weeds take on a new form of beauty never before dreamed of. Take, for instance, the hoar-hound,



THE OHIO STATE HONEY EXHIBIT AT THE WORLD'S FAIR.

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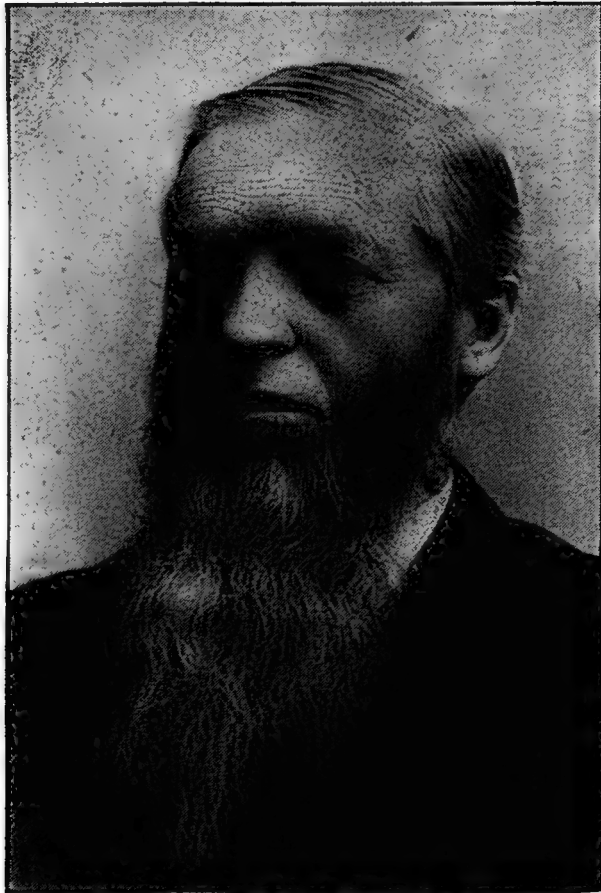
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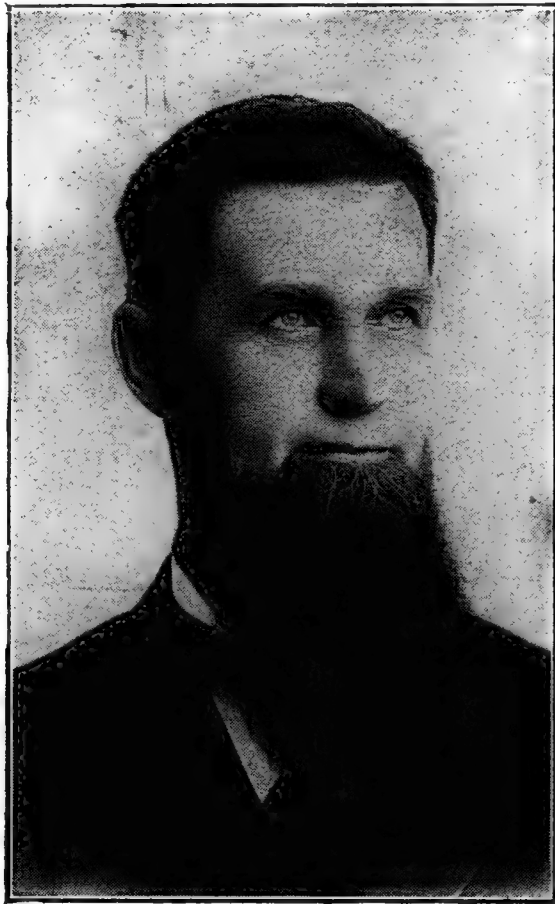
one of the bees' great food providers, but which is ordinarily looked upon as a great nuisance. Put this insignificant-looking little flower under a microscope, and look at the wonderful beauty of God's handiwork. You will doubtless feel ashamed that you ever regarded it as a nuisance. When you also know of the innumerable millions of bees it sup-



DR. A. B. MASON,
Superintendent of the Ohio State Honey Exhibit at the Fair.

plies with honey and pollen, upon which bees feed their young, and that the tons of honey it yields supplies abundance of this delicious sweet for the use of man (woman is included), our contempt for this common weed is changed to admiration. These are the beautiful lessons I learn daily from my little bees.

The study of bee-culture is almost limitless. There is all the time something more to be learned. By the use of an observatory hive everything that is done inside a large hive can be seen, and much learned in this way. I would advise every one who keeps bees either for pleasure or for profit to have an observatory hive. It is like an index to a



E. KRETCHMER,
Superintendent of the Iowa State Honey Exhibit at the Fair.

book, and about as indispensable to a successful apiarist. I keep mine on my gallery, and can tell whether honey is coming in either freely or scantily, without having to open a large hive.

Poultry-keeping combines very nicely with bees, as most of the work comes on at different seasons of the year. After the bees are snugged away nicely for the winter, there is

no more work with them until spring, and not much very early in the season, and at this time the chicks should be hatched for the most successful rearing. I began the fine or fancy poultry business at the same time I commenced with my bees, and have kept them right along together, and find little conflict between the occupations. I have raised from 75 to 250 chickens per annum. Of course all are not show-birds. The culls find a ready market upon my own table, for we do like nice fried chicken, and almost always have plenty of it at all seasons of the year. Nice, fresh eggs—we wouldn't know how to get along without them, either.

I have five varieties of chickens: Houdan, White Houdan (which originated in my yard), White Crested Black Polish, Silver Spangled Hamburg, Black Langshan and Houdan. I also have a few crosses between the Langshan and Silver Spangled Hamburg and Langshan. These are very fine, hardy, thrifty birds, and would be a fine cross for those who do not care to keep the pure breeds.

Dampness is the greatest enemy that I have found. This can be prevented by having dry quarters for them, both old and young. Keep their houses cleaned at least twice a week—every day is better. Keep constantly a supply of clean, fresh water for them; give them plenty of wholesome food, with an abundance of green stuff; make good nests for them and they will surely shell out the eggs—pure fresh ones—not such as you usually get from your grocer.

I believe in chickens and intend to have them as long as I have ten square feet of land upon which to keep them. They pay me well as a financial investment, besides adding luxuries to my own bill of fare.

If in this limited review of these two occupations so well adapted to home life and the retirement so dear to many women, occupations which have given me so much pleasure as well as good, hard-moneyed profit, I should happen to assist any dependent woman to helpful thoughts for self-support, I shall feel more than repaid for this little effort in presenting Bees and Poultry as a womanly and profitable home business.

MRS. S. E. SHERMAN.

The Committee on Revision.

The committee selected to revise the report before its publication desire to make the following statement:

The committee appointed to review this report would respectfully suggest that hereafter the committee be appointed at the *first session*, as it will give them a better opportunity to compare notes.



THE ONTARIO, CAN., HONEY EXHIBIT AT THE WORLD'S FAIR.

The object of this committee is to prevent mistakes as much as possible. In the convention the secretary or reporter is very busy with his many duties, and it is almost impossible for one person to get everything just right. Had the list of names been submitted to the committee, several small mistakes would have been rectified.

H. D. CUTTING,
EUGENE SECOR,
A. B. MASON,
Committee.

NAMES OF PRESIDENTS AND LIFE AND HONORARY MEMBERSHIP.

Presidents.

President.	Year.	Meeting.
*A. F. Moon	1870.....	Indianapolis, Ind.
Rev. L. L. Langstroth.....	1871.....	Cleveland, Ohio.
*M. Quinby.....	1872.....	Indianapolis, Ind.
Rev. W. F. Clarke	1873.....	Louisville, Ky.
Seth Hoagland.....	1874.....	Pittsburg, Pa.
Rev. W. F. Clarke	1875.....	Toledo, Ohio.
G. W. Zimmerman	1876.....	Philadelphia, Pa.
*W. H. Andrews	1877.....	New York, N. Y.
J. H. Nellis.....	1878.....	New York, N. Y.
†Thomas G. Newman.....	1879.....	Chicago, Ill.
Thomas G. Newman.....	1880.....	Cincinnati, Ohio.
Dr. N. P. Allen.....	1881.....	Lexington, Ky.
†Prof. A. J. Cook	1882.....	Cincinnati, Ohio.
D. A. Jones.....	1883.....	Toronto, Ont.
Rev. L. L. Langstroth.....	1884.....	Rochester, N. Y.
L. C. Root.....	1885.....	Detroit, Mich.
†H. D. Cutting.....	1886.....	Indianapolis, Ind.
†Dr. C. C. Miller.....	1887.....	Chicago, Ill.
†Dr. A. B. Mason	1888.....	Columbus, Ohio.
Dr. A. B. Mason	1889.....	Brantford, Ont.
†Hon. R. L. Taylor.....	1890.....	Keokuk, Iowa.
P. H. Elwood	1891.....	Albany, N. Y.
†Hon. Eugene Secor.....	1892.....	Washington, D. C.
Dr. C. C. Miller.....	1893.....	Chicago, Ill.
Rev. E. T. Abbott.....	1894.....	St. Joseph, Mo.

Life Members.

D. A. Jones.....	Beeton, Ontario
†Thomas G. Newman.....	Chicago, Illinois
†A. I. Root.....	Medina, Ohio
†E. R. Root.....	Medina, Ohio
J. T. Calvert.....	Medina, Ohio
†C. P. Dadant & Son.....	Hamilton, Illinois
†Dr. C. C. Miller.....	Marengo, Illinois
†Charles F. Muth.....	Cincinnati, Ohio
†A. N. Draper.....	Upper Alton, Illinois
†Mrs. L. Harrison.....	Peoria, Illinois
†Eugene Secor.....	Forest City, Iowa
G. H. Knickerbocker.....	Pine Plains, New York
O. R. Coe.....	Windham, New York

Honorary Members.

Rev. L. L. Langstroth.....	Dayton, Ohio
*Samuel Wagner.....	Washington, D. C.
*Mosss Quinby.....	St. Johnsonville, New York
*Mrs. Ellen S. Tupper.....	Brighton, Iowa
Rev. Johann Dzierzon.....	Karlsmarkt, Prussia
*Andreas Schmidt.....	Eichstadt, Bavaria
Prof. L. Gerster.....	Berne, Switzerland
*T. W. Woodbury.....	Mount Radford, England
*Major F. von Hruschka.....	Dolo, Italy
F. W. Vogel.....	Lemanshofel, Prussia
*Rev. George Kleine.....	Luethorst, Prussia
*Baron A. von Berlepsch.....	Munich, Bavaria
Baroness L. von Berlepsch.....	Munich, Bavaria
*Prof. C. T. E. von Siebold.....	Munich, Bavaria
Dr. Angelo Dubini.....	Milan, Italy
Count Alfonso Visconti di Saliceto.....	Milan, Italy
Dr. A. S. Packard.....	Providence, Rhode Island
†Dr. C. V. Riley.....	Washington, D. C.
Mrs. Frances A. Dunham.....	DePere, Wisconsin
T. F. Bingham.....	Abronia, Michigan
Eduard Bertrand.....	Nyon, Switzerland

Prof. Frank R. Cheshire.....	London, England
Rev. W. F. Clarke	Guelph, Ontario, Canada
Hon. ——— Ross	Guelph, Ontario, Canada
Hon. Edwin Willits	Washington, D. C.
Prof. William Saunders	Ottawa, Canada
T. W. Cowan.....	London, England
C. J. H. Gravenhorst.....	Wilsnack, Prussia
Samuel Simmins	Seaford, England
Cav. A. de Rauschenfels.....	Collechio, Italy
Harald Hovind	Tvedestrand, Norway
Georges de Layens.....	Paris, France
Hjalmar Stalhammar	Gothenburg, Sweden
Karl Gatter	Vienna, Austria
A. de Zoubareff.....	St. Petersburg, Russia
G. P. Kandratieff.....	St. Petersburg, Russia
Charles Dadant.....	Hamilton, Illinois
*Alfred Neighbour.....	London, England
*Eduard Corl.....	Bruex, Bohemia
†Dr. H. W. Wiley.....	Washington, D. C.
†J. W. Pender	West Maitland, M. S. W., Australia

*Deceased. †Present at the Chicago Convention.

NATIONAL BEE-KEEPERS' UNION.

General Manager's Eighth Annual Report

FOR THE YEAR 1892.

At the close of another year, it is my duty to review the work of the National Bee-Keepers' Union and offer some comments thereon.

The influence of such an organization, and the help which its moral support renders to its members, have been demonstrated many times during the past year, and such is but a repetition of the past eight years of its history.

"Great deeds cannot die;

They with the sun and moon renew their light

Forever—blessing those that look at them."

The limits allowed to this report will compel the greatest brevity, and so I must enter at once upon the facts, without any further preliminary remarks.

Early in the year the city council of Miami, Mo., was petitioned to expel the bees from the city limits. An ordinance was passed and the work begun, but the influence of the National Bee-Keepers' Union was so great that the city council dared to do nothing more than thus to make itself "the laughing stock of the world."

In April, malicious hatred worked up a case against Mr. H. D. Davis, in Bradford, Vt., and threatened to prosecute him for keeping bees there. The village trustees passed the law declaring bees a nuisance, but they dare not enforce it. Copies of the decision of the Supreme Court of Arkansas, officially deciding that "bee-keeping is not a nuisance," were

freely distributed among the trustees and those in authority, and Mr. Davis was allowed to continue to keep bees there, as he had done for thirteen years before. An envious neighbor made the trouble, but he was soon squelched by public opinion, which had been created after reading the documents of the National Bee-Keepers' Union.

Down in Tennessee, in Hill City, John F. Haeger keeps bees. His neighbor raises grapes, but found them rotten because of the very rainy season, and concluded that the innocent bees had done the damage. He threatened to spray them with arsenic, to destroy the bees. He was informed that it was a dangerous thing to do, for some of the poison may get into the surplus honey, and humanity would suffer by its consumption. He was further told of the existence of the National Bee Keepers' Union, and that its special work was to protect its members from such malicious folly. He went home to think about it, and the next day came to Mr. Haeger and apologized for his abuse of the bees and murderous intent. Mr. H. wrote thus to the general manager: "Stick another feather in the Union's cap." Surely its moral influence is as potent as its financial backing.

Iowa next came into line. John Foulkes, in Cascade, sued his two neighbors, who kept bees, to compel their removal. Among other foolishness, he claimed that the bees swarmed around his premises, shut out the light of day and kept his house in darkness." Possibly the bees had stung him near the eyes, and so had shut out the light of day to him personally.

This is about on a par with the ignorance of the fellow who declared that his neighbor's bees ate up his peaches and made a meal of his young ducks.

The bee-keepers, Messrs. Wyrick and Hunter, were members of the Union, and the general manager took charge of the case and employed an able attorney to defend it. The case was submitted in August, on *ex parte* testimony, by agreement, the affidavits being very numerous on either side. The judge refused to grant injunctions, because, he said, it

would "interfere with a business which the courts recognize as legal." The Arkansas decision did it. Thus ended the bombast of John Foulkes and his malicious slanders against the bees and their owners.

Out in California a member of the Union was threatened by jealous neighbors for keeping bees in National City. It was Mr. Arthur Hanson, and he applied to the general manager, who dosed the city officials with the official decision of the Supreme Court of Arkansas, that "Bee-keeping was not a nuisance." That settled the whole matter. Peace and quietness reigns there now.

But why multiply words? All cases of trouble submitted to the Union show the same result, and this part of the report may well be concluded with the following from the pen of that staunch friend of the bees, Mrs. L. Harrison. She says:

"The Bee-Keepers' Union has done much to cause our industry to be respected and placed upon a firm foundation. It has taught evil disposed persons and corporations that the production of honey is a legitimate business. Its able manager, Mr. Thomas G. Newman, of Chicago, is always on the watch-tower, scanning the horizon, and on the least appearance of danger is on the alert with well-directed guns. He has caused the enemy to retract and apologize for malicious statements."

New Work for the Union.

For several months there has been much discussion in the bee periodicals about the Union assuming new functions. As no one is able to say whether it shall or shall not do so, it is now proposed to submit it to vote.

In order to act in a legitimate manner, here comes a motion from one of the vice-presidents. It explains itself:

MR. THOMAS G. NEWMAN,

General Manager of Bee-Keepers' Union:

I move you that the scope of the National Bee-Keepers' Union be enlarged, so as to include prosecutions looking to the prevention of the adulteration of honey. Yours truly,

A. J. COOK.

This has been seconded by Mr. Ernest R. Root, and supported by a number of other members.

In order to submit it to the members, I have prepared an amended constitution, sufficiently broad to allow of the proposed new functions and any others that may hereafter come up. It vests in the Advisory Board the power to act on any matter in the interest of the pursuit of bee-culture presented to the Union for its action. In this way immediate work can be done without waiting for a full vote of the membership. Of course, care must be taken to put into office its best and most reliable members. (A good selection can be made from the list of names attached to this report, and such only are eligible to office.)

I desire that this matter should receive due consideration, and would ask every member to vote. Let there be no spaces unfilled when you return the "Voting Blank," to be exchanged for a Membership Certificate.

The only changes in the constitution submitted are in Articles IV. and VI. Please read these carefully, and then vote FOR or AGAINST, as you deem for the best interests of the Union.

If the amended constitution is adopted (it takes a majority vote to do so), then the duties of the General Manager will be greatly enlarged, and it is nothing but *just* that he should have a salary. I would suggest that it be decided to make that salary 20 per cent of the gross income of the Union each year—whatever that may be.

Some have stated that it was a mistake not to have done this at the start, and perhaps it was. This matter can, however, be adjusted now, and it is therefore submitted to a vote *when* such salary should commence.

By paying a percentage as salary for the General Manager, there can be no risk. The more the gross income the more work to be done, and the more pay for doing it. The more work done, the more prosperous will be the organization; the larger its available funds, the more remunerative

to the Manager. Let every member vote as he feels on this subject by filling up the space devoted to it on the voting blank.

The General Manager can do a great deal to keep expenses down. Twice during the past year I have cut the attorney's fees down one-half, and during my administration have in this way saved many hundreds of dollars for the Union. The Manager should, therefore, have an interest in continuing this watchfulness and practicing strict economy.

Proposed Amendments to Constitution.

(Altered parts are in *Italic.*)

ARTICLE I.—This organization shall be known as the "National Bee-Keepers' Union," and shall meet annually, or as often as necessity may require.

ARTICLE II.—Its object shall be to protect the interests of the Bee-Keepers, and to defend their rights.

ARTICLE III.—The officers of this Union shall consist of a President, five Vice-Presidents and a General Manager (who shall also be the Secretary and Treasurer), whose duties shall be those usually performed by such officers. They shall be elected by ballot, and shall hold their several offices for one year, or until their successors are elected, blank ballots for this purpose to be mailed to every member by the General Manager.

ARTICLE IV.—*The officers shall constitute an Advisory Board, which shall determine what course shall be taken by this Union upon any matter presented to it for action, and cause such extra assessments to be made upon the members as may become necessary; provided, that only one assessment shall be made in any one fiscal year, without a majority vote of all the members (upon blanks furnished for that purpose), together with a statement showing why any other assessment may be required.*

ARTICLE V.—Any person may become a member by paying to the General Manager an entrance fee of ONE DOLLAR, for which he shall receive a printed receipt making him a

member of the Union, entitled to all its rights and benefits. The annual fee of \$1 shall be due on the first day of January of each year, and **MUST** be paid within six months in order to retain membership in this Union.

ARTICLE VI.—*The funds of this Union shall be used for any purposes in the interest of the pursuit of bee-culture, when such are approved by the Advisory Board; and to pay the legitimate expenses of this Union, such as printing, postage, salary of the Manager, clerk hire, etc.*

ARTICLE VII.—This Constitution may be amended by a majority vote of all the members at any time.

The Future.

The movement now on foot to add to the membership of the Union, after enlarging its powers and multiplying its work, may make such a change that the next report may show from 1,000 to 5,000 names.

Each of the bee periodicals have donated a page to the Union, to assist in gaining new members for 1893, and a vigorous effort will be made to place it in a position to command respect in maintaining the rights of apiarists, as well as to prosecute the adulterators of honey, who now seem bent on destroying the pursuit if not arrested in their career of crime and madness.

Financial Statement.

Balance, as per last report	\$558 58
Fees from 404 members for 1892.....	404 00
Total	\$962 58
Court expenses, briefs, printing, attorney's fees, postage, etc....	339 50
Balance, December 20, 1892.....	\$623 08

The Union has engaged attorneys for the defense of several cases, the cost for which will have to be paid when the cases are reached on the docket.

Dues and Election of Officers.

It now becomes my duty to call for \$1 for the coming year, as dues from each member. A blank is enclosed to be used for sending it, and also a voting blank. Fill up all the blanks and send to the Manager, with a postal note or money order for \$1, in the envelope sent with it. It must be received by Feb. 1, 1893, or the vote will be lost.

Now comes the most difficult part of my report. I have repeatedly stated that I ought to retire and give place to a younger man, but the appeal comes to me from so many members not to think of such a thing, at least for the present, that I have called a halt, to let my "feelings" consult with "judgment" as to my *duty* in the matter.

Mr. Root, in *Gleanings in Bee Culture* for December 15, puts it in this way: "Mr. Newman's management of the Union has been so wise and efficient that, if it will be out of the question for him to act as chief, he certainly should be retained as assistant or adviser, in the event of the change; then, if necessary, let younger blood do the work."

In reference to this proposition, I will say that, if there is henceforth to be a salary attached to the office, so that I can hire that part done which would require more time and energy than I could command, I will consent to take the office for another year, if the votes give a *decided call* for me to do so.

THOMAS G. NEWMAN,
Manager.

General Manager's Ninth Annual Report

FOR THE YEAR 1893.

Another year has been added to the history of the National Bee-Keepers' Union, and I will now attempt to recount and review the work done during the year, so that the members may be fully informed concerning it.

The amendments to the Constitution, proposed in the last report, were voted upon and carried almost unanimously—the vote being 289 for them to 28 against. There were 31 blanks. The blanks were mostly from new members, who thought they ought not to vote at the time of their first introduction.

The election closed on February 1, 1893. There were then 348 votes received, and the canvas of them resulted as follows:

For President—Hon. R. L. Taylor, 141; James Heddon, 136; scattering, 50; blank, 21.

For Vice-Presidents—C. C. Miller, 272; G. M. Doolittle, 270; A. I. Root, 265; A. J. Cook, 242; G. W. Demaree, 228; scattering, 248.

For General Manager, Secretary and Treasurer—Thos. G. Newman, 321; scattering, 3; blank, 24.

For Salary of Manager—20 per cent., 342; scattering, 6; Back salary voted, the years being added together, amount to 566. This, divided by the number of votes, lacks a little of being twice—carrying for only one year, and leaving votes for 218 over. It therefore commenced with January 1, 1892.

First Battle for the Year.

The result of "the first round" for the new year in the battle with the enemies of the pursuit was a complete victory for the Union, demonstrating its value to the bee-keeping industry. It is worthy of remark that it is equally successful, no matter whether with the courts which administer the laws, or Legislatures which enact them.

On January 16, as soon as the Senate of Missouri got to work, Senator Sebree introduced a bill entitled, "An act to regulate the keeping of honey-bees in cities, towns and villages in this State, and to provide a penalty for its violation." The first section read as follows:

"No person shall own, keep, or have in his possession, or under his control, any honey-bees in boxes, bee-gums or other things of confinement in any city, town or village in this State, whether organized under general or special charters, nearer than fifty feet from the line of any adjacent real estate owner or person in possession of such adjacent property."

Section 2 provided for a penalty of from \$10 to \$20 for each week that the bees were there after notice to remove them.

Section 3 provided that if the bees could not be kept at that distance from adjacent neighbors, "then in such event the keeping of them in such city, town or village is absolutely prohibited."

This was a clear case of prohibition of the pursuit in all "cities, towns and villages" in Missouri, if it had become a law, for a bee-keeper must have OVER a hundred feet to be able to keep his bees "fifty feet from the line of any adjacent real estate owner, or person in possession of such adjacent property." But few bee-keepers would have more than fifty feet in all.

Mr. W. S. Dorn Blaser, ex-Secretary of the Missouri Bee-Keepers' Association, sent a copy of the "bill" to the Manager of the Union, and instantly the "Decision of the

Supreme Court of Arkansas" was brought into play, like a gatling gun, and copies of it were sent to the members of the Legislature and to the Governor. Letters were written to them advising them not to allow it to pass, as it was unconstitutional, and would be so construed by the courts, as they had the precedent of the Arkansas Supreme Court to guide them.

The Hon. R. L. Taylor, the President of the Union, was appealed to, and he backed up the General Manager by giving his "opinion" on the bill—that it was unconstitutional and should be "fought to the end" vigorously.

Mr. Joseph G. Banning, President of the Missouri State Bee-Keepers' Association, also appealed to the Manager of the Union, and was instructed to fight the bill at every step, that the Union would "see him through," etc. If it had passed both houses, then the Governor would have been appealed to, and would in all probability have vetoed it. President Banning afterwards wrote me thus: "I thank you for your prompt assistance." It was the prompt action taken by the Union which brought this foolishness to a stop, saved the State from disgrace and prevented the bee-keepers from being annoyed by useless legislation.

The members of the Legislature received the bill from the Senate and promptly killed it, for they had been "posted" by the printed matter of the Bee-Keepers' Union. The enemies of our pursuit were foiled, and the Union stuck another "feather in its cap."

The Sugar Honey Heresy.

This "dogma" stirred up such a furore in the early part of the year that the Manager of the Union received a shower of letters in condemnation of the "heresy." It was promptly met by the promise of the Manager to "prosecute to the full extent of the law any who may *dare* to offer for sale as *honey* any of that sugar-syrup swindle."

He stated publicly that consumers must not be trifled with. Their butter must be made from pure cow's milk, and

their honey must be pure nectar from the flowers. "Sugar-syrup" must be sold under that name—not honey—just as the law requires oleomargarine to be sold under its proper name—not butter.

Bees and Peaches and Grapes.

Mr. J. A. Pearce, of Grand Rapids, Mich., was threatened by twenty-five peach-growers, stating that his bees were eating their peaches. All nature was perishing for want of moisture, and some insects (bugs, beetles, etc.,) had appropriated the juice of a few cracked peaches and grapes, and all was charged to the bees.

The kicking peach-growers were supplied with the Arkansas decision that bees were not a "nuisance" *per se*, and that bee-keepers could and should be protected in their rights. Upon finding out the legal status of the affair they subsided.

To show that the bees are wrongly accused in these matters, and that they do not break the skins of the fruit, I refer to the following report lately published in many rural and metropolitan papers:

"Exhaustive experiments have been conducted under the auspices of the Department of Agriculture, to decide if the honey-bees are deserving of the severe condemnation received in some quarters from fruit-growers. Neither care or expense was withheld. Hives were kept within a building from which the bees could not escape. In this grapes, peaches, pears and plums, varying from green to dead ripe, were placed. The bees were deprived of food and left with the fruit exposed. Many came to the fruit but never broke the skin; but when they found it broken they fed upon the exuding juice. They showed no tendency to use their jaws in cutting open a place.

"The test lasted thirty days; other bees were tried with similar results. In all cases food was taken only from fruit which had been previously broken. Consequently it appears that bees will not injure sound fruit. Professor Panton, of the Ontario Agricultural College, says that this is what might

have been expected when the structure of the bee's mouth is considered. It is quite different in the case of wasps, which are supplied with jaws suitable to break into the skin, and in all probability they are the cause of the injured fruit upon which complaining observers have seen bees feeding."

Mr. G. B. Woodberry, of California, was also threatened by fruit-growers for keeping bees in that locality. He appealed to the Union, and was supplied with the Arkansas "gun" to use upon the board of supervisors.

On December 5, 1893, Mr. G. W. Brodbeck wrote to the Manager, giving the result as follows:

"The Woodberry trouble has quieted down, at least for the present. The Supervisors instructed the district attorney to look up the decisions rendered, as given in the Bee-Keepers' Union Report. He did so, and concluded that it would not be wise to incite or aid in antagonizing one industry against another. So we trust that the influence of the Union will be effectual."

Unfinished Business.

Several cases in Wisconsin, Iowa, New York, Canada, Nebraska, Texas, Colorado and elsewhere are under way, and it would not be wisdom to publish anything about them now. Several of these, it is thought, will be necessarily carried to the supreme courts, thus to compel the highest tribunals to give bee-keepers their rights. More anon.

Business Statement.

Balance, as per last report	\$623 08
Fees from 461 members for 1892.....	461 00
Total.....	\$1,084 08
Expenses for the year.....	362 37

Balance, December 16, 1893.....	\$721 71
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The Union has engaged attorneys for the defense of several cases, the cost for which will have to be paid later.

The efforts last winter to increase the membership were not as fruitful as we all hoped, on account of the financial disturbances throughout the country, but better times are before us and the Union will not be forgotten.

Dues and Election of Officers.

It now becomes my duty to call for \$1 for the coming year, as dues from each member. A blank is enclosed to be used for sending it, and also a voting blank. Fill up all the blanks, and send to the Manager with a postal note or money order for \$1 in the envelope sent with it. It must be received by Feb. 1, 1894, or it will be lost.

When voting, care should, of course, be taken to put into office its best and most reliable members. (A good selection can be made from the list of names attached to this report, and such only are eligible.)

As long as my services are desired, and I am able to devote them, the Union will have my best energies.

Fraternally,

THOMAS G. NEWMAN,

147 South Western avenue, Chicago, Ill. *General Manager.*

All the officers for 1893 were re-elected for 1894.

Names of members omitted on account of lack of space.

The good work done by the National Bee-Keepers' Union in California is attested by Mr. Fred M. Hart, of Traver, California, when sending his dues and vote for officers, dated January 4, 1894. He says:

"The fruit raisers of this locality have been very peaceful since the Union gave them such a dose of medicine two years ago, by the distribution of the decision of the Supreme Court of Arkansas determining that the keeping of bees was a legitimate pursuit, and cannot by law be considered a nuisance.

"The Union has been a grand success in Central California, assisting bee-keepers to maintain their rights, as well as in showing the fruit raisers that the bees are their best friends instead of their enemies. I hope it will be as successful everywhere else.

"I know that my 175 colonies of bees do not injure my fruit, and I have some 20 varieties of fruit on my 20 acres of land. It would take considerable to induce me to entirely move away my bees from my fruit farm, for I do not believe that my fruit would be any way near as productive."

SWEET CLOVER AS A FORAGE AND HONEY PLANT.

A VALUABLE ARTICLE.

I am surprised that any bee-keeper of experience, who has had a reasonable opportunity of observing, should report sweet clover anything less than a first-class honey-plant; and yet I am aware that there are a few adverse reports coming from very reliable sources.

I am quite sure—yes, I think I know from my own experience and observations with this plant, extending through a period of a dozen years or more—that it is unsurpassed, and equaled only by the noted alfalfa; and these convictions are supported by the opinions of some of the most practical and reliable bee-men of my acquaintance.

The last season was the first for several years when white clover alone yielded me any surplus, and this, too, with the fields white with its bloom in every direction as far as bees could fly; and yet I should not be warranted in claiming that white clover is not a good honey-plant. It has a world-wide reputation that is unimpeachable. If it were no more abundant than its cousin it would hardly have gained this enviable reputation, certainly not in the last few years.

I think it has been generally conceded by practical bee-keepers that it will not pay to plant for honey alone. This conclusion is undoubtedly a safe one. We must, then look for some other value besides that of honey, in order to recommend sweet clover as a field crop.

AS A FORAGE PLANT.

I once supposed, as most people do now, that sweet clover was entirely worthless as a forage plant for stock—that nothing would eat it; but I have demonstrated to my own entire satisfaction that horses, cattle and sheep will not only learn to eat it, but will thrive upon it, both as pasture and dried as hay, and that hogs are fond of it in the green state. I say they *learn* to eat it, because most stock have

to acquire a taste for it, not taking readily to it at first. I gave it a fair trial for pasture last summer. My horses and family cow fed upon it almost entirely during the dry part of the season. They became fat and sleek, without the help of grain or other feed. The milk and butter from the cow showed no objectionable flavor. The amount of feed furnished was something surprising. It has a habit of continually throwing out or renewing its foliage and its bloom; also, when cut or fed back, it keeps it constantly fresh. After gaining a growth of four or five feet in height in dense masses in my pasture it was fed down entirely, even the coarse stalks, so that, at the close of the season, nothing was left. The seeding was, of course, destroyed; but in my desire to put to a severe test the feed value of the crop, this was lost sight of.

Sweet clover, like alfalfa, sends its great roots deep down into the hardest, driest soils, thus enabling it to withstand severe drouths as no other plant can. This gives it great value as a fertilizer; and growing as it does upon the hardest, poorest soils, it recommends itself for reclaiming soils too poor for raising other crops. It has a habit of taking possession of vacant lots and roadsides, which has caused some alarm with those unacquainted with its habits, fearing it would spread over the fields and prove a pest. I can assure you it will do no such a thing. In all my acquaintance with it I have never seen it spread into cultivated or occupied fields to any extent. I have been very reckless with the seed about my own premises, and if there had been any danger in this direction I should have found it out long ago.

Some time during the latter part of last summer I made a trip through a part of the State where a severe drouth was prevailing. The cattle and sheep looked gaunt and hungry, and were roaming over pastures that were dry, scorched and dead. Fire had run over the farms here and there, adding still farther to the look of desolation. In places the cows had been turned into the growing corn, the only

green forage in sight. I wondered again and again how it was possible for the stock to escape entire starvation. A field of sweet clover, with its dark green foliage, would have made a refreshing picture amidst this desolation. It would have been more than a picture. It would have supplied a place where it would have been most heartily welcome and appreciated in this trying emergency. I think it will recommend itself and come to be appreciated soon in such times of severe drouth. It makes a slender growth the first year. It is this crop that is most valuable for hay, and cutting it will not interfere with the second year's growth. The second year it grows coarser; blossoms, seeds and dies, root and branch. If cut for hay in the second year it should be cut just as it is beginning to bloom. A second crop may be cut late in the season. It should be well dried, and it requires good weather to do it in. If cut for seed it may be threshed and hulled with a machine like red clover, or the seed may be sown without hulling.

Now don't be induced, by the bright picture I have drawn, to seed your whole farm to sweet clover, for it would result in an unprofitable failure, I am sure. But if you desire to test its value, do it on a small scale, with an acre or two, and do it thoroughly. I have found it no easy thing to succeed in making it grow as a field crop, and I would advise sparing no pains to get it started. When once it gets possession of the ground it will stay, if allowed to ripen a late crop of seed. Sow with winter wheat or rye in the spring, the same as other clover. Please don't write me for seed. I have none to spare.

H. R. BOARDMAN.

East Townsend, Ohio, January 7.

DOES ALSIKE CLOVER PAY?

WILL GROW ON SOD LAND—A SUBSTITUTE FOR BASSWOOD NOW
BEING RAPIDLY CUT OFF.

[From Gleanings in Bee Culture.]

Under date of December 24, 1893, a correspondent in Hamilton county, Nebraska, writes me in substance, in regard to alsike clover, as follows:

"MR. BALDRIDGE—I have now grown alsike clover about six years. At present I have about 80 acres of it, but I expect to plow it up the coming spring. The dry weather of the past year has about used it up. I cut the past season some 70 acres of alsike for seed, but the drouth was so severe upon it that I got only 55 bushels. One year I cut 63 acres of alsike for seed, and got on an average four bushels per acre. I shipped the seed to Chicago, and it netted me \$8.15 per bushel. Last fall I plowed up 80 acres of alsike and seeded the land to wheat. The land, owing to drouth and too close pasturing, had become weedy. I have now 110 acres of alsike mixed with timothy. Some of this I intend to cut for hay and use the rest of the land for pasture. Alsike does well on land too wet for red clover. With me it seems to seed best in moderately dry seasons.

"I have sown alsike on timothy sod, also on wild-grass sod, and with grand success. With plenty of moisture the seed will catch and grow on almost any kind of land already seeded down to grass. I have never seeded land with alsike in the fall; but if sown with rye or wheat, and early, I see no reason why it should not winter all right. When sown early in spring, on rye or wheat, it makes a good catch and is a success.

"I keep a few bees. Alsike makes a good bee-pasturage, and the honey therefrom can hardly be surpassed in quality."

Now, dear reader, please send me *your* report on alsike, in case you have one, no matter whether favorable or otherwise. The bee-keeping fraternity wants all the facts about alsike it can get. Owing to the rapid destruction of basswood, we desire to supply its loss with something that will be at least its equivalent. It is my belief that alsike clover is the very thing we want, and is a profitable substitute for basswood. I have kept bees for many years where basswood abounds, and have had more or less experience with alsike, and I have concluded that I should much prefer to depend on alsike for honey. One thing is certain, the honey from alsike is superior to that from basswood, and gives far better satisfaction, as a table sauce, to consumers generally. At least, that has been my experience.

The reader will please notice, in the letter from Nebraska, that *sod* land, of any description, will do to sow alsike seed upon. This is a fact very important to know. It is by no means a new fact to the writer, nor to several others in this vicinity; but it may be new to the multitude. The present winter is just the time to scatter alsike seed upon sod land. The melting of the winter snows and the early spring rains will be certain to cause nearly every seed to germinate and grow. Try a few acres, at least, and note the results. Utilize the roadsides and the waste places everywhere, and especially the unused land of the railroads. If you own no land, try to induce some of the farmers, whose land is within short range of your bees, to give this plan of getting a start with alsike a trial. You can afford to make your farming friends a present of enough seed to keep every bee you own at work while the alsike is in bloom. But it is not necessary to do this, nor is it *policy* to do just that way. The better way is to supply them with seed at your own expense, and then have them repay you as soon as they ascertain the fact that they can afford to do so. This plan does not excite suspicion that you alone have an "ax to grind," and that you are on the hunt for some one to furnish the grindstone.

On sod ground, or when mixed with timothy seed, two pounds of alsike seed is plenty for one acre. Four pounds of alsike is plenty for one acre when sown alone. I have no alsike seed for sale, so please don't write me for any. I presume Mr. Root can supply the readers of *Gleanings* with all the seed they may want.

St. Charles, Illinois.

M. M. BALDRIDGE.

HONEY FROM SWEET CLOVER.

[From *Gleanings in Bee Culture*.]

During my visit at Salt Lake City I wrote up at length in regard to the beautiful honey gathered from sweet clover that thrives so luxuriantly out on the sandy alkali plains, where no other plant could flourish on account of alkali. This honey is not only equal to any other produced in the world, but it is about the whitest and finest-looking honey in the world. The only respect in which it is inferior to the white-sage honey of California is that the sweet-clover honey candies readily on the approach of cold weather, but the sage honey does not; and when candied it is, perhaps, the whitest candied honey gathered from any known source. Well, just now I am greatly pained to find that some of the food commissioners think, without analyzing, this honey of Salt Lake City is sugared, probably because of its extra fine appearance. In fact, some specimens of candied honey are almost as white as snow, or as white as white sugar. One who is at all conversant with the plant—sweet clover—will have no difficulty at all in recognizing sweet clover honey. It has a faint or very delicate flavor, reminding one of the smell of sweet clover while in bloom. If you bruise the foliage of the sweet clover when the plant is growing rank in the spring, you will also get a strong perfume, quite like the delicate flavor of the honey. Sweet-clover honey ought to be as readily identified as basswood and clover; and it is a burning shame that the friends who are producing and marketing this beautiful product should be persecuted by having some stupid official pronounce it, or even suggest, that it is not pure honey.

A. I. R.

HOW TO DESTROY BURROWING ANIMALS.

[Written for the American Bee Journal.]

Mrs. Atchley desires to know how to "rid her apiary of skunks." Trapping has been recommended as the "best way," but every one knows, who has trapped or shot the "varmints," that the perfume emitted when they are thus killed is more pungent, penetrating and lasting than Lundberg's celebrated extracts. *If* she knows where the animals burrow, asphyxiate them with bisulphide of carbon, which is the cheapest, simplest and most effective method yet devised for destroying the pests, and all other burrowing animals. The method of using it as recommended in the report of the Secretary of Agriculture for 1892, briefly stated, is as follows:

"About three tablespoonfuls for prairie dogs, or two tablespoonfuls for spermophiles, should be poured upon a bunch of rags or waste, which should be immediately placed within the mouth of the burrow, and the burrow closed. (Crude bisulphide is much cheaper and better than the pure article.) Care should be taken in using it, as it is both inflammable and explosive.

"Its efficacy depends on the fact that its vapor is heavier than air, and when introduced into burrows flows like water into all the recesses. This fact should be borne in mind in using it on sloping ground or in cases where there is reason to suppose that the holes contain water, as unless the poison is introduced at the highest opening of the burrow a certain part of the hole will remain free from it, and here the animal may take refuge. If the holes contain water, this may act as a water-trap, preventing the diffusion of the vapor."

As to the above being an effective method of destroying prairie-dogs, I can testify of my own knowledge. A friend in two seasons succeeded in depopulating a large "prairie-dog town" on his farm, and I believe there is not a dog alive to-day on the premises. This land now produces good crops, which but a few years ago was overrun by dogs and rattlesnakes.

It has proved to be "a safe and an effectual means of putting an end to the constantly increasing inroads of the ground-squirrel upon the grain-fields of the State" (California), says Prof. E. W. Hilgard, of the University of California, who originated the bisulphide method of destroying burrowing mammals.

Gardeners, bee-keepers and others in this State, who have had their gardens, orchards and vineyards destroyed by pocket-gophers, will find speedy relief if the the remedy be properly applied—the B. Carbon route to the happy burrowing grounds will not fail.

Farmers can kill prairie-dogs, wolves, rabbits and ground-squirrels much more easily and cheaply than by poison; try it and be convinced.

Whenever rats burrow under corn-cribs, outbuildings or in cellars having no outside outlet, the carbon can be applied most effectually and no stench will be created.

If, however, skunks are numerous in Mrs. Atchley's neighborhood, it may require united effort on the part of her neighbors to destroy the animals; but if they burrow on her premises she can soon put an end to their depredations.

Madison, Neb.

A. C. TYRREL.

RULES FOR GRADING HONEY.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association in Washington, and, so far as possible, quotations are made according to these rules:

FANCY.—All sections to be well filled; combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy White," "No. 1 Dark," etc.

\$1,000 REWARD.

TO WHOM IT MAY CONCERN.—In view of the false and damaging statements to the honey business, in regard to making comb honey by machinery, etc., I have thought best to silence all such falsehoods as they come up, by the following offer: I will pay \$1,000 in cash to any person who will tell me where comb honey is manufactured (i. e., filled and capped over) by machinery; or I will pay the same sum to any one who will find machine-manufactured comb honey on the markets for sale. I am as safe in making this offer as I should be if it were strawberries or hens' eggs. It never has been done and it never will be done. If you wish to know whether I am responsible for the above amount or not, go to any bank and ask them to quote my standing in Dun's or Bradstreet's Commercial Agency, or write to the First National Bank of Medina.

A. I. ROOT, Medina, Ohio,
Editor of Gleanings in Bee Culture.

April 19, 1889.

THE BEES OF ST. SIMON'S.

[For several years the bees deposited their honey in the tower of the Church of St. Simon's Island, off the coast of Georgia. The rector regularly sold the honey and devoted the proceeds to missions.]

There lies, far in the bosom of the seas,
An island fair:
All summer long the patient little bees
Are busy there.
The honey which they gather in their round,
Buzzing from flower to flower,
They load it in a quaint bee-hive they've found
In the old church-tower.

Their store is taken every year, nor do
The bees complain;
They know that God will send next spring a new
Supply again.
The produce of their careful gathering goes
To men in lands abroad,
Who preach glad tidings of great joy to those
Who know not God.

Like Jonathan, when, fainting, he did roam
The hungry waste,
How was he quickened when a honey-comb
He did but taste?
So to those weary laborers on lone shores
This humble hive supplies
The luscious droppings of its annual stores
To light their eyes.

Poor Christian, e'en in such small folk as these
A lesson see!
Doth God take such good care for tiny bees,
Yet none for thee?
Then say not, Little-faith, thou hast no power
To gather honey too;
All round thee bloom the flowers, and every flower
Is filled with dew.

—*Thoughts that Cluster.*

APPENDIX.

The following list of members have sent in their names and fees since we began the printing of this report, Feb. 1st:

Allen, Thomas B., Stirrup Grove, Ill.

Anthony, A. B., Coleta, Ill.

Bertram, James, Bristol, Ill.

Covill, C., Buda, Ill.

England, P. J., Fancy Prairie, Ill.

Everett, J. D., Oak Park, Ill.

Hayek, Bernard W., Quincy, Ill.

Martin, John H., Bloomington, Cal.

Robbins, D. E., Payson, Ill.

CORRECTION.

On page 124, taken from the *American Bee Journal*, should read Oct. 12th instead of April 12th.

Our report being limited to the size of the appropriation for its publication, we are compelled to leave out all statistics, and the answers to queries and other matter, which we very much regret, as it would add one hundred and fifty more pages.

We thought of putting in the answers to the question lists sent out, so far as answered by members of the Association, and found that even they would add more pages than our appropriation would pay for, and still leave enough for postage to send them out even to the members.

JAS. A. STONE,
Secretary.

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